



Master in Tourism
Specialization in Strategic Management of Tourism Destinations

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**Environmental Practices in Hospitality Industry for a more
Sustainable Tourism
(Case Study- Sheraton Lisboa Hotel & Spa)**

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Master in Tourism

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Sustainable Tourism**

(Case Study - Sheraton Lisboa Hotel & Spa)

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Hotel Studies for obtaining the Master Degree in Tourism, Specialization in
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ABSTRACT

As tourism is advancing to the maturity phase, consequently, the principal concern of tourism stakeholders should be the sustainability development. Green hotels are considered environmentally friendly businesses that implement environmental initiatives as reducing waste, saving water and energy. Environmental issues influence people to be more conscious than ever, changing their lifestyle and adopting green practices. Many hotels, such as Marriott, Hilton, Best Western and Hyatt are now following the trend by building green hotels. Hotels have a tremendous effect on people behaviors, therefore, they could change the impact of hospitality industry by investing in the implementation of environmental practices. Moreover, it is our responsibility to protect the environment as we are the one that caused its destruction, that affects us and our future generations.

This report describes the importance of adopting an environmental policy by the hospitality industry, as this implies not only environmental protection or poverty reduction but also costs saving. Moreover, it presents an overall view of environmental practices in the hospitality industry, particularly at the Sheraton Lisboa Hotel & Spa, the host institution where I developed my internship, which gave me the opportunity to understand better how a sustainable hotel manages its environmental operations. Subsequently, after the analysis and collection of the information from the hotel's documents related to sustainability management, as well the data from the observation method, it was possible to obtain a response to the objectives proposed for this research. Therefore, during the internship I also managed to develop some projects that contributed to the efficiency of the hotel's environmental management processes.

Keywords: Sustainability, Hospitality Industry, Sheraton, Environmental Practices

RESUMO

O turismo está a avançar para a fase de maturidade, por este motivo o desenvolvimento da sustentabilidade deve ser a principal preocupação dos intervenientes do turismo. Os hotéis sustentáveis são considerados como negócios respeitadores do ambiente que implementam práticas ambientais para reduzir os resíduos e o consumo de água e energia. As questões ambientais estão a influenciar as pessoas a serem mais conscientes ao alterar os seus estilos de vida e adotar hábitos mais sustentáveis. Muitos hotéis estão a seguir estas tendências através da “construção” de hotéis ecológicos, como por exemplo Marrior, Hilton, Best Westren e Hyatt. Os hotéis têm um efeito tremendo no comportamento das pessoas, deste modo podiam alterar o impacto da indústria hoteleira ao investir na implementação práticas ambientais. Além disso, é a nossa responsabilidade proteger o ambiente, pois somos nós a principal causa da destruição ambiental que afetam todos nós e as futuras gerações.

Este relatório descreve a importância de adoção de uma política ambiental pela indústria hoteleira, visto que isso não implica apenas a proteção do ambiente e redução da pobreza, mas também a economia dos custos. Além disso, apresenta uma visão global das práticas ambientais na indústria hoteleira, nomeadamente no Sheraton Lisboa Hotel & Spa, onde realizei o estágio e que me deu a oportunidade de compreender melhor como um hotel sustentável gere as suas operações ambientais. Posteriormente, após a análise e recolha de informações dos documentos do hotel relacionadas à gestão da sustentabilidade, bem como os dados do método de observação, foi possível obter uma resposta aos objetivos propostos para o estudo. Deste modo, durante o estágio também consegui desenvolver alguns projetos que contribuíram para a eficiência dos processos de gestão ambiental do hotel.

Palavras-chave: Sustentabilidade, Hoteleira, Sheraton, Práticas Ambientais

GLOSSARY

Desalination – is a process that removes salts and minerals components from saline water. Saltwater is desalinated to produce water suitable for human consumption or irrigation.

Environmental footprint – measures the demand and supply of nature. It tracks this demand through an ecological accounting system and measures the quantity of nature it takes to support people or an economy.

Environmental policy – means a general statement with a commitment of an organization to the laws, regulations, and other policy mechanisms concerning environmental issues. These issues generally include air and water pollution, waste management, maintenance of biodiversity, the protection of natural resources, wildlife and endangered species.

Greenhouse gases – are a group of compounds (carbon dioxide, methane, nitrous oxide and ozone) able to trap heat in the atmosphere. Without greenhouse gases, the average temperature of Earth's surface would be about -18°C , instead of the present average of 15°C .

Heat recovery system – is the collection and re-use of heat arising from any process that would otherwise be lost. The process can help to reduce the overall energy consumption of the process itself or provide useful heat for other purposes.

Solar photovoltaics – this converts sunlight into electricity via cells. The technology was discovered by scientists in 1954 and it has been transferred to small devices such as solar calculators and watches.

Solar water-heating – this solar technology produces hot water. Solar panels collect the energy, which directly heats the water system.

Sustainability Certifications – are voluntary, usually third party-assessed, norms and standards relating to environmental, social, ethical and food safety issues, adopted by companies to demonstrate the performance of their organizations or products in specific areas.

Wastewater – is any water that has been affected by human use, in other words is used water from any combination of domestic, industrial, commercial or agricultural activities.

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LIST OF ABBREVIATIONS

AB – *Agriculture Biologique*

CO2 – Carbon Dioxide

CHR – Center for Hospitality Research

CLS – Creative Lodging Solutions

ECF – Elemental Chlorine free

EEA – European Environment Agency

EMAS – Eco Management and Audit Scheme

EPAL – *Empresa Portuguesa das Águas Livres*

EU – European Union

FAO – Food and Agricultural Organization of the United Nation

F&B – Food and Beverage

FF&E – Furniture, Fixtures & Equipment

FSC – Forest Stewardship Council

GER – Green Economy Report

GHG – Greenhouse gas

GSTC – Global Sustainable Tourism Council

HOD – Head of Departments

HQ – Headquarter

HVAC – Heating, Ventilation, and Air Conditioning

IAQ – Indoor Air Quality

ICNF – *Instituto da Conservação da Natureza e das Florestas*

IPCC – International Committee for Climate Change

ISO - International Organization for Standardization

IUCN – International Union for Conservation of Nature and Natural Resources

kWh – Kilowatt hour

LCD – Liquid-crystal display

LED – Light-emitting diode

LEED – Leadership in Energy and Environmental Design

MGC – Make a Green Choise

MI – Marriott International

MSAP – Marriott Sustainability Assessment Program

NGOs – Non-Governmental Organizations

PC – Personal computer

PGS – Starwood Preferred Guest

PMS – *Pinheiro de Melo & Salgado*

SIWI – Stockholm International Water Institute

TV – Television

UK – United Kingdom

UN – United Nations

UNEP – United Nations Environment Education Program

UNESCO – United Nations Educational, Scientific and Cultural Organization

UNICEF – The United Nations International Children's Emergency Fund

UNWTO – United Nations World Tourism Organization

US – United States

USD – United States dollar

WCS – World Conservation Strategy

WHO – World Health Organization

WTO – World Tourism Organization

WWF – World Wildlife Fund

WWTP – Wastewater Treatment Plants

INTRODUCTION

Environmental issues are not new since the human species has always interacted with the environment and changed it. Ecological problems are no longer isolated from one another but instead have become interrelated elements, representing a real environmental crisis (Zein et al., 2008).

Since the EU foundation, it has published some Environmental Programs and the 5th Program (1993), adopted an identical approach to all causes of pollution. It selected a few sectors to draw their attention to environmental pollution, and tourism was one of those affected sectors. It also proposed some measures, such as improving management of mass tourism and the quality of tourism services, promoting alternative forms of tourism as well as awareness campaigns (Fáilte Ireland, 2006).

Sustainability is critical because it helps the companies to mitigate their impact on the environment, maintaining the equilibrium in the world. It is also important because it helps to reduce the gas emissions and minimize the climate change. Sustainability strategy benefits companies namely hotels to build a unique competitive advantage compared to other accommodations, as well as optimizing the utilization of natural resources reducing its impact in the environment (Khan and Jauhari, 2014).

Sustainability management is still a recent operation adopted by many hotels around the world. The interest for the environment had developed slowly and had turned environmental management into a competitive process through the hospitality industry. Besides technological innovations, the environmental challenge stands in modern society's values, which are at the root of the ecological crisis. Therefore, environmental education represents a significant role in promoting best practices (Zein et al., 2008).

Fortunately, tourists have become more sensitized by sustainability issues, therefore their activities have also evolved and are no longer considered to be a destructive element, but rather an ally in environmental conservation, which encourages the hoteliers to continue their environmental management. Due to increased environmental awareness through consumers this stimulates hotels to adapt their strategies on behalf of social and environmental responsibility (Holcomb et al., 2007).

Eco-hotels emerged from the necessity to improve the quality of people's life, making sustainable development possible and bringing harmony to the environment. By application of environmental practices in hospitality industry there could be avoided many environmental issues such as, global climate change, biodiversity loss, water and air pollution, forest soil loss and degradation (Zein et al., 2008). Therefore, by creating more sustainable hotels this would mean to deliver global sustainability and positive change in the world.

Goals and scope definition

Considering that the world's population is steadily growing, along with it also increase the environmental problems. That is why sustainability has gained emphasis in recent years where environmental preservation has become one of the businesses' concern.

The topic of this research “Environmental Practices in Hospitality for a more Sustainable Tourism” I determined after the master's lesson “Environmental management systems” where I learned that the environment around us is getting more polluted and discomforting. So, it was then when I realized that I want to investigate this problem and understand what actions undertake the tourism stakeholders to diminish their impact on the environment.

The proposed study reflects the hospitality industry and its impact on the environment. Therefore, to achieve the accomplishment of this research I decided to perform an internship instead of a dissertation because I believe it will give me a better perspective on sustainable hotels, as well as the opportunity to understand how an environmental policy operates in a sustainable hotel, not only theoretically but also practically. Due to this internship, I will have the chance to be integrated in a hotel's sustainability administration, putting in practice the proposed environmental projects, as well as helping me to understand if I want to continue my future career in this direction.

I chose the hospitality industry for the development of my report investigation because I believe hoteliers have a high potential to influence people's habits and change their perceptions regarding the preservation of the environment, consequently hotels have a tremendous power to amplify the environment protection through the implementation of environmental initiatives.

The purpose of this report is to analyze the environmental practices implemented at the host hotel and after its analyzation to identify which are the sustainable initiatives that the hotel could adopt further.

This study also aims to prove to the hoteliers the outstanding benefits from the implementation of environmental policy both in costs saving and environmental protection.

The questions that served as starting guides for the development of this research are the following:

What are the impacts of the hospitality industry on the environment?

How can hoteliers contribute to the protection and improvement of environmental quality?

How to inspire guests to adopt environmental practices while on vacations?

The central objective of this study is to evaluate the commitment of sustainable hotels toward the environment, followed by the intention to identify the theory applicability in practice concerning the topic involved.

The secondary objectives of this report are to evaluate the sustainability measures undertaken by the Sheraton Lisboa Hotel & Spa; to identify the environmental problems in each of the hotel's departments; to promote the importance of best practices; and to identify strategic actions that can be implemented inside the hotel, which will consequently reduce the impacts on the environment.

Research structure

This research study is structured based on the division into four different interrelated chapters.

The first chapter includes the main theoretical concepts crucial for the project development, which covers the support for the study analysis and final consideration. It begins with an introductory part concerning the tourism area, in particular, the hotel industry. Furthermore, it discusses the environmental issues and challenges that the hospitality industry is facing, the concept of sustainability and its increasing global importance.

The second chapter addresses the teaching methodology used, which includes the introduction and description of the internship and presents a justification for initial motivation that contributed to the selection of this study and the principal objectives.

As for the third chapter, this corresponds to the case study, the Sheraton Lisboa Hotel & Spa. Beginning with a brief description of the hotel and the services it offers, followed by a reflection of both the Sheraton Lisboa Hotel's environmental policy and of the Marriott International chain. This chapter also involves the review of all the environmental measures undertaken by the hotel, continuing with the main sustainability challenges I managed to identify during the internship.

The fourth and the last chapter includes the evaluation of environmental performance indicators at the Sheraton Lisboa Hotel & Spa, followed by the critical analysis of the hotel' sustainability management. This chapter discusses the proposed projects to be implemented in the hotel unit, along with the description and explanation of the various activities completed throughout the internship.

Finally, the conclusion of the research is presented, reflecting the whole stage and the work developed, bringing together the relevance of the performed study, as well as the future orientations and the main difficulties detected in the elaboration and development of this project.

Chapter I. Literature review. Hospitality Industry and Sustainable Development

1.1. Hospitality Industry and its path to Environmental Sustainability

Hospitality industry

The hospitality industry forms a major part of the tourism industry. According to the Oxford English Dictionary, hospitality means the reception and entertainment of guests, visitors or strangers with liberality and good will. Therefore, the word hospitality originates from hospice, the term for a medieval house of rest for travelers and pilgrims. The word hospice is clearly related to hospital, also referred to an early form of what nowadays we call it nursing home. Barrows, et al. (2012) argue that hospitality refers not only to hotels and restaurants but also to other kinds of institutions that provide shelter, food, or both to people away from their homes.

During the last four decades, the hospitality industry has been expanding rapidly. Since the Second World War the industry started to become truly internationalized with the development of global hotel and catering chains. Therefore, WTO reported that in 1955 there was registered nearly 10.5 million rooms in hotels and other various accommodation establishments all over the world; 50% of these were located in Europe and North America. An increasingly large number of hotels are owned by large chains. Experts in the industry believe that soon the hospitality industry will be dominated by a small number of global “mega chains”.

Sustainability

According to the United Nations Commission on Sustainable Development, sustainability means, meeting the needs of the present without compromising the ability of future generations to meet their own needs.

The Brundtland Report established the concept of sustainability. This report suggests that sustainability involves an obligation to the future generation which is related to the ethical use and preservation of natural resources and also sharing between people (Bhushan and Jauhari, 2008).

The concept of sustainability first came to public attention with the publication of the World Conservation Strategy (WCS) in March, 1980. The WCS was prepared by the

International Union for Conservation of Nature and Natural Resources (IUCN) with the assistance of the United Nations Environment Education Program (UNEP) the World Wildlife Fund (WWF), the Food and Agricultural Organization of the United Nations (FAO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO). The WCS was a strategy for the conservation of the earth's biological resources in the face of international environmental problems such as deforestation, desertification, ecosystem degradation and destruction, species extinction and loss of genetic diversity, pollution, and soil erosion" (Gössling et al., 2009, p.1).

"The Rio Earth Summit has been the catalyst for all of the policies and legislation enacted in sustainable development. The clear message from the Summit was that nothing less than a transformation of our attitudes and behavior that would bring the necessary changes to ensure sustainable development.

The result of the Earth Summit was the adoption of Agenda 21, a wide-ranging blueprint for action to achieve sustainable development worldwide. Agenda 21 addresses many pressing problems and aims to prepare the world for the challenges of the 21st century. It contains detailed proposals for action in social and economic areas and for conserving and managing natural resources; protecting the atmosphere, oceans and biodiversity; preventing deforestation; and promoting sustainable agriculture. (Fáilte Ireland, 2006, p.11)."

According to World Tourism Organization, sustainable tourism is defined as satisfying current tourist and host community needs, while protecting and improving future opportunities. It is seen as a guide in managing all resources, in such a way that economic, social, and aesthetic needs may be met, while maintaining cultural integrity, essential ecological processes, biological diversity, and life support systems.

Environmental Impacts of Hospitality Industry

Environmental degradation started with the Industrial Revolution, accelerated by the increase of production and consumption (Seiffert and Loch, 2005).

According to Styles et al. (2013) the tourism services within its accommodation sector, involve a wide range of activities that give rise to various environmental pressures, and, eventually, impacts.

“The quality of the environment, both natural and man-made, is an important part of the tourism product, but many activities relating to the industry can have adverse environmental effects. These impacts are often linked with the construction and management of tourism facilities, including hotels, restaurants, shops, golf courses and leisure centers (Fáilte Ireland, 2006, p.10).”

Tourism is also responsible for 5% of the world’s carbon dioxide emissions, out of which hotels and other types of accommodation account for 1%. A comparatively small, yet important, footprint that the tourism and hospitality industry has assumed as a priority to be addressed (UNWTO, 2011).

The development of the hospitality industry brought a lot of negative impacts on the environment, which requires concrete sustainable measures and policies to reverse the damage that was caused by their operations.

In the GER (Green Economy Report) it was examined that despite the many potential positive impacts associated with tourism and hospitality they also have a significant contributor to environmental pollution and degradation (UNEP 2013).

In accordance with EMAS Regulation (2009), an 'environmental aspect' is an element of an organization’s activities, that has an impact on the environment. Therefore, environmental impacts arise from pressures generated by environmental aspects, such as the emission of greenhouse gases or water pollution.

Environmental impacts associated with the hospitality industry refers to increased resource and energy use, water or air pollution and waste generation.

According to Styles et al. (2013) the environmental aspects are classified into direct and indirect elements:

1. Direct environmental aspects are elements of an organization’s activities, products or services over which the organization has full management control and can directly influence.
2. Indirect environmental aspects are the same elements of an organization’s activities, which in this case the organization does not have full management control, and also do not have a direct influence. These could be aspects related to products used, transportation, and other factors in the supply chain. Although these aspects may not be within direct control of the accommodation facility, they

can still have significant implications for the environmental impacts of the services, seen from a lifecycle perspective. Tourist behavior, including customer choice, is an important indirect aspect over which tourism actors may have some control through provision of information and incentives.

There are plenty of environmental impacts caused by the hospitality industry, such as:

➤ *Depletion of natural resources*

Energy usage

Due to the inefficient use of energy, there are burned large quantities of gas and oil which lead to the depilation of natural resources contributing as well to the environmental degradation.

As the world population continues to grow, energy demand is increasing worldwide causing the depletion of natural resources. The energy consumption in the world is nearly three times than what it was 40 year ago, 80% of the world energy supply comes from coal, oil and natural gas which emit greenhouse gases, causing climate change and other negative environmental impacts. The scariest part is that these fossil fuels are finite non-renewable, and their reserves are decreasing faster than we can imagine (HES, 2011). That is why human quality of life and future existence rely on secure, affordable and sustainable energy.

In the hospitality industry, the energy is thought to be the second highest operating cost, after salaries, involving significant amounts of CO₂ emissions, this shall be a strong reason for hotels to reexamine its conservation efforts. The highest energy consumption is associated with very demanding technologies used, particularly for providing comfort, such as, lighting, heating, ventilation and air conditioning units, as well as in laundry rooms, kitchens, and general services areas (HES, 2011).

It is of a great importance to underline that hotels are among the top five types of buildings in the service sector for energy consumption, after food production, sales and health care facilities. Europe has the world's largest hotel stock with approximately 5.45 million hotel rooms – nearly half of the world's total (UNEP, 2013).

The burning of fossil fuels releases harmful greenhouse gases causing global warming which limits the business growth of tourism and hospitality industry. This effect is starting to be clear especially in the case of wildlife, beach and sports destinations. And as a result,

some of the international hotel chains have become more aware regarding environmental issues and have set targets to reduce its greenhouse gases (Kular, 2014).

By reducing CO₂ emissions, hotels can make a positive contribution to the environment and, at the same time, reduce their operational costs. “Through the use of renewable energy sources, local pollution is reduced, tourist destination quality is maintained, and visitor experience is enhanced (Rainforest Alliance, 2003, p.16)”.

Besides, efficient energy use can improve company’s reputation among customers and stakeholders concerned with reducing global energy consumption and its impact on climate change (Rainforest Alliance, 2003).

The hotel sector could save on operational costs by taking advantage of the potential of energy efficiency and renewable energies (UNWTO, 2011).

Water usage

Water is an integral part of human evolution, without it, there would be no life on earth. Fresh water is found in rivers, lakes, lagoons, ground sources, and the atmosphere; however, compared to our world size, and considering how essential it is to life, we actually have very little fresh water available: less than 1% of our planet’s total water is suitable for drinking (Rainforest Alliance, 2003).

From of all the activities, agriculture contributes to approximately 90% of the total water consumption (Gössling and Hall, 2013). That means that with the depletion of available water, food production will also be affected.

Although water may seem abundant to us it is expected to become seriously limited in the future, even so, each of us uses 20 times more water than our ancestors. With just one drop of water leaking every second from a defective or improperly shut faucet, we would be wasting 30 liters of drinking water in one day (Rainforest Alliance, 2003).

Gössling et al. (2011) estimated that direct water consumption for tourism in 2000 amounted to 9 274 million m³ globally, representing 3.4 % of domestic water consumption and 0.3 % of total water consumption. The worst part is that this consumption is concentrated in tourism destinations that may be vulnerable to water stress.

During peak tourism demand usually in summer, water availability is at its lowest, and tourist water consumption is considerably higher, per capita, than resident water consumption. However, tourism demand for water is expected to increase considerably over the coming decades, while climate change will reduce the availability of freshwater and increase the frequency of severe droughts (Gössling et al., 2011).

Many resorts and hotels have a lot of water waste from long guest showers and huge pools. Tourists tend to consume greater amount of resources in comparison with local people, therefore, their impact needs to be studied in order to be minimized (UNEP, 2013).

(Zein et al., 2008) claim that indeed, a guest at an international hotel consumes an average of 300 liters a day. This situation endangers the quality and the availability of fresh water for local communities. That is why actions shall be taken on behalf of the hospitality industry to reduce its water consumption.

➤ *Food waste*

Sharma (2014) claims that food is more than products it also involves ecosystem, environment, economy and social sustainability. Unfortunately, our food habits have a huge impact on our society and environment.

The food left at the end of the cycle is known as “food waste”, by wasting food consumers manifest their buying behavior and consumption pattern (Parfitt et al., 2010).

Globally one third of the total food prepared for human consumption gets lost or wasted, which amounts approximately 1.3 billion ton per year. Hotels throw away large quantities of food which creates problems for the environment, both in the action of throwing out the food and the demand it places on the environment to produce more. It is estimated that tourism generates 35 million tons of solid waste globally. (Gustavsson et al. cited by Sharma, 2014).

➤ *Waste Production*

The waste harms the environment in many ways: loss of valuable resources (raw materials, such as: card, plastic, and glass), air pollution through the release of methane gas from the buried trash in landfills and need for landfill space (Fáilte Ireland, 2006).

Examples of solid waste generated by tourist facilities:

Accommodation Sector:

- Newspaper and magazines;
- Cleansing agent containers;
- Plastic shampoo and cosmetic soap bottles;
- Old towels, linens, bed sheets and furniture;
- Paint and varnishes;
- Wastewater;
- Cans, bottles and tins;
- Food waste;
- Product containers; and
- Serviettes and straws (Fáilte Ireland, 2006).

From plastic cups to the way a company prints agendas and maps, can either increase or decrease the trash produced, the environment preservation can also depend on that.

➤ *Water pollution*

Wastewater generation can increase during peak tourism seasons, especially in developing countries. This poses a particular challenge, as treating such peaks in wastewater flows requires high capital investment in 'oversized' modular wastewater treatment plants (WWTP).

The Hospitality sector can be a cause of water pollution by:

- Disposal of water through drains which are cracked or leaking;
- Swimming pool discharges that are not appropriately treated;
- Use of detergents on the premises which may wash into the drains and leak, or that may be stored inappropriately, spill and enter the water course;
- Run-off from chemicals used on golf courses;
- Drainage to local groundwater from impermeable surfaces e.g. car parks can contain oil etc. which may eventually enter the watercourse (Fáilte Ireland, 2006).

Considerable impacts of waste and local wastewater; for example, it is commonplace for hotels to discharge untreated sewage directly into the sea (UNEP, 2013).

➤ *Biodiversity destruction*

The presence of hotels' buildings may destroy the local environment and habitat of native animals.

Tourism is concentrated in regions that sustain rich or unique biodiversity, such as national parks, coastal zones and mountain (Styles et al., 2013).

Thus, biodiversity is integral to the ecosystems and natural features that generate tourism, and the long-term success of many tourism destinations is critically dependent upon good planning and biodiversity conservation.

“Physical impacts of tourism development include:

Construction activities and infrastructure development. The development of tourism facilities such as accommodation, water supplies, restaurants and recreation facilities can involve sand mining, beach and sand dune erosion, soil erosion and extensive paving. In addition, road and airport construction can lead to land degradation and loss of wildlife habitats and deterioration of scenery.

Deforestation and intensified or unsustainable use of land. Construction of mountain resort accommodation and facilities frequently requires clearing forested land. Coastal wetlands are often drained and filled due to lack of more suitable sites for construction of tourism facilities and infrastructure. These activities can cause severe disturbance and erosion of the local ecosystem, even destruction in the long term (Fáilte Ireland, 2006, p.32).”

Luxury and resort hotels occupy large land areas. Styles et al. (2013) argue that poorly managed construction of accommodations leads to negative impact on biodiversity. As a result, it also affects the tourist destinations because biodiversity is integral to the ecosystem and natural features which eventually generates tourism. However, by generating an income from non-destructive use of natural resources, tourism and accommodation sectors can contribute to the conservation of biodiversity – especially in less economically developed parts of the world.

The Emergence of Sustainability in Hospitality

The Rio+20 Outcome Document “The Future We Want” (UN 2012) where highlights the role of sustainable tourism in the transition to a green economy for sustainable development and poverty elimination.

As the tourism industry keeps growing, this growth often comes with unsustainable consumption practices endangering ecosystems and natural resources (Zein et al., 2008).

Hunt and Auster (1990) argue that in the last few years many companies have taken on a fundamental role in improving environmental conditions, altering their positioning with respect to their use of natural resources by reducing their impact on the environment.

To conserve local biodiversity while sustaining the tourism industry, a new approach involving sustainable development shall be implemented. Considering that the hotel industry is at the heart of tourist activity, it is necessary to evaluate its impact on the environment (Zein et al., 2008). Through green initiatives, hotels are able to conserve water and energy, leading to lesser carbon dioxide emissions and global warming, and simultaneously reduces costs (Kular, 2014).

As hotels are the heart of tourism industry and as they have such a damaging impact on the environment, there is a need for more greener hotels. “Hotel guests are more conscious of environmental problems and have started to consider the environment in their accommodation choice. The development of eco-labels is thus helping tourists in their choices. Without cutting on clients’ comfort, many efforts can be made in the backstage by the hotel management industry through the application of best available practices and technological innovations (Zein et al., 2008, p. III)”.

Nowadays sustainability can be a smart tool for any hotel, because besides the fact that it will contribute to the protection of the environment it can also help the company to reduce its costs and in addition it can also improve the company's image in the Marketplace.

Companies that includes environmental practices in their agenda, obtain economic benefits, such as reduced costs in terms of energy, water and waste.

According to the 2011 Green Economy Report (led by UNEP), correct investment in green strategies would allow the accommodation sector to continue to expand steadily over the coming decades while ensuring significant environmental strategies such as reductions in water consumption, energy use and CO₂ emissions. With this investment, significant reductions in water consumption (18%), energy use (44%) and CO₂ emissions (52%) are possible, in comparison with those hotels that do not have implemented a sustainability policy in their system management.

The implementation of environmental measures at a global scale has increased a lot in order to avoid the irreversible effects on Planet Earth, which were elaborated by trustworthy experts such as the United Nations (UN), the International Committee for Climate Change (IPCC) and the Stern report. They also warn about "the suicide " of our future planet because of the perpetuation of current trends.

“In a few years, it is certain that environmental protection will become a legal obligation for hotels. Those who act first will be able to anticipate the law and will acquire a competitive advantage. It is time for the hotel industry to accept its environmental responsibilities to reduce the environmental impact of international tourism (Zein et al., 2008, p. III)”. Taleb Rifai the UNWTO Secretary-General (2011) argue that in a world looking for new models of economic growth and development, fighting climate change and adopting sustainable management practices is no longer an option, but a condition for survival and success.

1.2. Environmental Management Initiatives in Hospitality Industry. Water, Energy and Waste

Dias-Angelo et al. (2014, p.352) present some definitions about environmental management from the perspective of studied hotels, such as, “Environmental management is adapting procedures and customs to satisfy specific points: energy consumption, water consumption, recycling, garbage and composting” and “Environmental concern is an important part of the management of companies that indeed have a commitment with sustainability. Our future and the future of companies depend on the actual actions we can carry out on behalf of the environment.”

Given that electricity typically accounts for 60 to 70 percent of a hotel’s utility costs, it’s worthwhile to reexamine the industry’s conservation efforts. The hospitality industry spends about \$3.7 billion on energy annually. Water use is a large part of the energy bill. A typical hotel uses 218 gallons of water per day per occupied room, according to the California Department of Resources Recycling and Recovery, primarily for restrooms, laundry, and landscaping. As just one example of the link between water conservation and energy reduction, at Caesars Palace in Las Vegas, Eric Dominguez, corporate director of engineering, utilities, and environmental affairs at the property, found that reducing water use by 7 percent resulted in savings of \$135,000 to \$218,000 in natural gas bills per year used to heat the water.

Water Management

Nowadays water scarcity is considered to be a global problem, with demand for water projected to exceed supply by 40% by 2030. By the same year, half the world's population will be living in areas of high-water stress. According to the latest research conducted by SIWI (Stockholm International Water Institute), almost 20 % of the world's population live in areas of physical water scarcity. A water scarce region is one where water resources development is "approaching or has exceeded sustainable limits" and "more than 75% of river flows are withdrawn for agriculture, industry, and domestic purposes". The private sector is a major water user and often completely dependent on water for production and service delivery. The Hospitality industry is one of these where water plays a determining part in everyday operations and potential growth.

Hotel companies have both a strong commercial and moral imperative for addressing water use. Cost is a clear factor: water accounts for 10% of utility bills in many hotels. Most hotels pay for the water they consume twice – first by purchasing fresh water and then by disposing of it as waste water. According to the UK's Environment Agency, depending on their water efficiency, hotels can reduce the amount of water consumed per guest per night by up to 50% compared with establishments with poor performance in water consumption. The moral reasons are equally compelling: water is a scarce resource in many resorts around the world, that is why hotels have a responsibility not to use more than necessary; and by reducing the amount of treated waste-water, this lower the risk of water pollution.

As a result, hotel's efforts regarding water reduction have shown considerable benefits. Water can be aerated, reduced in pressure, and recycled in order to reduce water waste. One of the most popular ways that hotels have reduced water consumption is replacing current appliances with water-efficient ones, including laundry facilities, toilets, showers, and faucets. One study showed that installing low-flow showerheads and aerated faucets saved \$1.50 per room per month for one hotel and using water-efficient toilets saved the same hotel 180,000 gallons of water per year (Alexander, 2002). Greywater recycling systems that reuse wash water have also been shown to cut about 23 percent of the total water consumption of some hotels. The payback period of these systems is around 14 years, but this number may vary according to the country. Guests who responded to an in-room questionnaire about the low-flow toilets were greatly satisfied (Gonzalez and

Leon,2001). It has also been found that water-saving notices in bathrooms that encourage customers to regulate their water use are effective. Another measure commonly adopted by hotels is localized irrigation systems in gardens.

Energy Management

“There is now a common global understanding that reduction of GHG emissions is crucial, and that to achieve this we need to reduce the amount of energy used from fossil fuels, and to increase the amount supplied from renewable energy sources, and the efficiency with which we use all types of energy (HES, 2011, p.15).”

As solar photovoltaic systems have become more practical, solar energy has become one-way hotels have been able to cut costs while using “green” energy. Studies have found that solar panels can generate around 25 percent of the energy that a hotel needs to operate (Bader, 2005). Reducing solar gain is also important. In tropical areas solar control film, a polyester layer used to coat windows, is highly beneficial, because it can be retrofitted into existing hotels at low cost and has been shown to save hotels 155kWh of electricity per year (Ahn and Pearce, 2007). Even something as simple as updating the heating system used in hotel swimming pools can save money. Although this practice has not been widely adopted, switching to an air-to-water heat pump from a conventional heating system (typically, heat from electronic sources or a condensing boiler) can save 50 percent of the energy used and reduce greenhouse gas emissions by 12,000 kg (Chan and Lam, 2003). Where natural gas is available, hotels can replace electricity with gas as a source of energy for the laundry and catering services, reducing the hotel’s environmental impact. This estimate is based on the findings that laundry and catering services constitute 30 to 40 percent of hotels’ energy consumption.

Energy from renewable sources help hotels to save energy, costs, and reduce emissions of greenhouse gases like CO₂. Investments in technologies that respect the environment have proven to be win-win activities that contribute both to the protection of the environment and to the long-term competitiveness of the private sector (HES, 2011).

Waste Management

The hotel industry has a long history of waste reduction, notably, recycling and composting. Recycling is a popular practice, perhaps because many recycling methods have a short payback period and can yield significant savings. In addition to recycling, a

study of Vietnamese hotels found that composting organic waste to produce fertilizer could be effective if a good system was in use and employees were educated in its use (Trung and Kumar, 2005). Hotels also have reduced disposal of FF&E, for example, by giving old furniture to charities or selling used equipment. Some hotels have switched to refillable dispensers for bathroom amenities, but others repurpose their tiny amenity containers by donating them to shelters and charities. One study found that most hoteliers are more willing to adopt small-scale waste reuse practices rather than larger practices that would require changes on an operational level (Radwan et al., 2010).

1.3. Environmental Certifications

Sustainability certifications have a central role to play in promoting environmental and social performance and satisfying consumer demand for responsible travel. The standards and norms' certifications can be applied to tourism enterprises such as hotels, resorts, marinas, travel agencies and tour operators. They may also be used to certify the environmental welfare of tourist destinations and natural resources at these destinations. Numerous standards of the International Organization for Standardization (ISO) have been used in the tourism sector to improve the overall quality of service. These include ISO 9000 for quality management and ISO 14000 for environmental management. Other voluntary standards have also emerged, such as, Green Globe certification used to verify sustainability performance of travel and tourism businesses and their supply chain partners and Blue Flag label, which is awarded based on the environmental performance of beaches.

Certification informs tourists regarding the environmental and social impacts of tourism-related activities and motivates consumers to act in favor of environmental protection through purchasing choice opting for certified enterprises. Therefore, securing an appropriate sustainability certification can help a tourism enterprise attract a higher number of visitors and move up-market to higher-paying customers, while protecting the natural environment that the industry depends on (UNEP, 2013).

The CHR reports have demonstrated the importance of sustainability certification in gaining favorable guest notice, including ISO 14001 and LEED. A study of over 2,000 independent hotels in Spain found that hotels that have implemented the ISO 14001 environmental standards displayed stronger sales and earnings before taxes and depreciation than those that were not certified (Segarra-Oña et al., 2011). Another study

of 93 LEED certified hotels found that those hotels displayed better financial performance than a larger sample of non-certified ones (Walsman et al., 2014).

Certification is popular subject in tourism and sustainability. Some in the industry say it doesn't address the critical mass while others say it is the only way to stop greenwashing.

1.4. Good environmental practices for Hotel's Guests

Often hotel's guests have little knowledge about the environmental issues, and while on holiday when trying to increase their entertainment, they carry out harmful actions to the environment (HES, 2011). And this is the moment where the hotels should interfere by working on turning their client's footprint into green ones, so they could enjoy their vacation with a clean conscience.

Beside the technological practices that the hotels undertake in environmental sustainability, they also need to provide their guests with adequate information about environmental issues and then to ensure them with simple tips which guests can easily follow during their stay and at home, as well.

In fact, it is very important that the hotel make sure all his guests are aware about its environmental goals which are to be achieved, because it is the only way its clients can contribute in materializing these final objectives.

Fortunately, nowadays guests are increasingly aware about environmental issues and respectful to green measures that the hotels adopt, some of them even chose "green hotels" for their vacation which carry out these measures over other hotels (HES, 2011).

The hotel industry has a tremendous influence on guests' behavior, that is why it can educate its customers about sustainability concerns encouraging them to reflect on their behavior at home and when traveling, as well as providing environmental practices, such as:

- Take a shower instead of a bath
- Turn off the tap while brushing the teeth, by doing so there can be can save up to nine liters of water
- Reuse the towels and linens instead of changing them every day
- Use sustainable transportation
- Use lighting only when needed
- Use reusable water bottles and coffee cups
- Rethink, Refuse, Reduce, Reuse and Recycle (International Tourism Partnership, 2014).

The Hotel Energy Solutions in collaboration with UNWTO (2011) elaborated some simple tips for the hotel's guests that related with the management waste, water and energy efficiency, the last two tips were elaborated by the author, which were developed during the internship for hotel's collaborators and guests:

➤ ***Un-plug and play.***

Did you know that a lot of energy is lost through plugged-in appliances that are not in use or are left turned on overnight? Your computer, cell phone or hair-dryer are consuming energy even when not in use.

Tip: Unplug, relax and enjoy your stay.

➤ ***Lighting the way.***

Many guests would like to know how they can be more energy efficient in their daily lives. Investing in an efficient lighting system consumes less energy, but it also improves your comfort. During your stay, we ask you to use lighting only when needed, and to please turn the lights off when leaving the room.

Tip: Switching to energy efficient lighting at home will pay for itself quite quickly.

➤ ***Trust your thermostat.***

Thermostats work best on AUTO. Extreme variations of temperature or turning the air conditioning/ heating system ON and OFF will not make you feel more comfortable any faster, and in the process unnecessary energy is wasted.

Tip: Try maintaining the temperature between 24 and 26°C in the summer and at 21°C in the winter. Remember this rule and you will save energy at home also.

➤ ***Keep your cool.***

In summer keep your windows and curtains closed during the day and your room will stay cooler. Try it at home and you will be surprised about how much energy is saved! Use windows wisely. Keeping your room comfortable with fresh air and at the right temperature is just as important as knowing when to open the window.

Tip: In the summer-time ventilate only in the evening, for a few minutes when the temperature is cooler outside, to refresh your room.

➤ ***Save water and energy.***

Did you know that taking a bath instead of a shower consumes three times more the amount of water and energy? Choosing not to have bed linen and towels changed every day also saves energy and water.

Tip: By taking a shower instead of a bath, you will save more than 100 liters of water.

➤ ***Consume less or recycle.***

Did you know that in 1950 the world's population of 2.5 billion people produced 1.5 million tons of plastic? And by 2016, a global population of more than 7 billion people produced more than 320 million tons of plastic? However, the worst part of it is that only 14% of all plastic produced worldwide is being recycled and the rest 86% end up in landfills or worse in the oceans.

Tip: Try to consume less and buy only what you really need, it will also save you money! But if this is too difficult for you at least try to recycle as much as you can.

➤ ***Do not forget to recycle.***

Did you know that 1 tone of recycled paper can save between 17 and 24 trees? More than that the recycled paper avoids air pollution by 74% and water pollution by 35%.

Or did you know that 1 recycled tin can will be back on shelves within 6 weeks?

Tip: It is time to care for our environment and to start give more value to our waste because by recycling it we are able to create new items and preserve the natural resources.

All the above practices need to have a continuous learning to maintain this culture of environmental sustainability for a long period of time.

1.5. The Importance of Environmental Practices in the Hospitality Industry

For a better performance of sustainable tourism this would mean the adoption of “best environmental practices,” more specific it would involve corrective measures implemented in every area of tourist business, namely the hotel sector. The undertaken actions are aimed to diminish the impacts on the environment as well as to improve the quality and image of hotels and tourism destinations (Zein et al., 2008).

The “green” hotels business is a growing niche because not only differentiate themselves from the standard hotels, but they also stabilize the environmental impact of this sector (Khan and Jauhari, 2014). This is mainly achieved through reductions in resources consumption which therefore contribute to the decrease of hotel’s expenses. There are many other benefits accomplished from the application of environmentally friendly practices, such as reduced energy and water consumption, the avoidance of penalties enacted by environmental authorities, providing also improvements in customer trust and public image (Fitiadisa cited by Khan and Jauhari, 2014).

Based on a study of 100 resorts in the United States, led by Cornell University (2015), claims that certain sustainability practices could be considered almost universal in the hospitality industry. The most common green practices are water conserving fixtures and linen-reuse programs. Moreover, a separate survey of 120,000 hotel customers finds that guests are generally willing to participate in sustainability programs. The study also finds an increased willingness to participate in environmental programs when hotels offer incentives, such as loyalty program points. From the results of the study it was found that environmentally sustainability programs do not diminish guest satisfaction (Bruns-Smith et al., 20015).

The environment is the major recipient of negative impacts created by the construction and operation of hotel and facilities. The success of tourism, as well as the hotel industry, largely depends on the availability of a clean environment (Khan and Jauhari, 2014).

Data from the WTO states that the tourist industry can be considered among the most important economic activities in a world context. Moreover, their benefits are not only economic, but are also of great social and environmental importance, since they represent great stimulus for the infrastructure development and the preservation of the environment.

Consequently, as tourism has so many impacts on the society and environmental it is important they find new ways to mitigate it.

Without fresh water the earth would be a lifeless planet. It is fundamental, that hoteliers understand the importance of fresh water and apprehend the huge quantities they expend unnecessarily. Guest at an international hotel consumes an average of 300 liters a day. When we actually have very little fresh water available, which is less than 1% of our planet's total water. The importance of environmental practices can be seen in the following example, "the use of flow regulators on shower heads saves 40 liters per 5 minutes shower, which amounts to more than 10% of water consumption per day and per room (Zein et al., 2008, p.11)." Besides, efficient water use is one of the easiest practices to implement, not only through facilities design features but also through management.

Supplying energy in 2030 will require an investment of US\$ 16'000 billions (UNEP, 2011). The hotel industry is also affected by this issue, as its energy demand is closely linked to the comfort of its guests. Besides the global warming the hotel industry also contributes to the depletion of petroleum reserves, which is why it is highly important hoteliers review their energy use and therefore reduce their impact on the environment through environmental practices and renewable energy (Zein et al., 2008).

Each company should be careful and prevent the release of harmful emissions and waste, including wastewater, as well as noise and visual contamination. As pollution is a delicate issue in hospitality industry by affecting human health and the environment, the application of environmental practices play an important role in preserving the environment and the image of both hotel and destination (Zein et al., 2008). Preserving the image of destination is as important as the image of a hotel because as Khan and Jauhari (2014) claim if the destinations are not preserved, then there would be a reduction in the number of visitors, consequently this would also affect the hospitality industry.

"The rapid development of the hotel industry often goes hand-in-hand with a lack of sanitation and waste disposal infrastructure. It is therefore necessary to implement strategies to minimize waste sources as well as to recycle them. Indeed, hotels produce large quantities of solid and liquid waste, which end up in the surrounding environment due to inadequate management and handling. The resulting dirty surroundings will also harm the image of the hotel and therefore the destination where it is located (Zein et al., 2008, p.17)."

Environmental practices regarding recycling are fundamental because it decreases the pollution caused by power plants and CO₂ emissions from manufacturing processes and it reduces the quantity of waste dumped in landfills.

A good waste management system can result in converting 80% of all waste into something useful, either through recycling or reuse.

By recycling it is possible to reduce resources such as water and energy, which can be analyzed in the examples below:

- Recycling a ton of paper, it will save the lives of 24 trees and will also save 20,000 liters of water. With one ton of recycled paper can be manufactured 900 kg of new recycled products;
- Recycling one can of aluminum will be back on shelves within 6 weeks and also saves enough energy for 3 hours of television, preventing air pollution;
- Recycling glass can save a third of the energy needed to produce new glass (Zein et al., 2008).

“A single liter of mineral oil can pollute one million liters of water, spreading to a surface area of 2'000 m² (Zein et al., 2008, p.18).” That is why it is also important that hotels recycle the used oil.

The environmental practices implemented by hoteliers will definitely ensure the economic and environmental sustainability of the sector. Consequently, the need for implementing environmental practices are to fight the planet's increasing deterioration, among other things (Zein et al., 2008).

Chapter II. METHODS

2.1. Research Method

This chapter will describe the methodological approach tackled in the current division. It will set the design, the method of primary data collection and its interpretation. Eventually, it will explain the purpose of consolidating a certain case study and nature of selected data.

The elements of this research are established based on preceding literature, theoretically and empirically.

As there are few types of research on environmental practices in the hospitality industry, I decided to conduct a qualitative investigation on this subject developed during the internship at the Sheraton Lisboa Hotel & Spa, trying to understand its environmental management. The data collection instrument was elaborated after selecting the hotel. A questionnaire form was elaborated based on the main questions that arise from the literature review of environmental management. After the information was collected initially it was processed and then analyzed in a summarized manner.

I decided to use the qualitative approach for this study because this method includes an exploratory description of a research issue. This design method enables readers to understand methodological specifications that illustrate the quality and utility of the investigation.

This research focuses on a case study developed at a sustainable hotel and encompasses the importance of environmental practices in hospitality industry.

Research objectives

This research outline two primary goals. First, I aspire to identify, in the different departments of a hotel, opportunities for optimizing its activities while reducing its operating costs and its environmental impacts. Second, I want to understand the relationship between environmental sustainability initiatives, guest participation, and customer satisfaction.

The overall goal of this study is to determine if human resource management practices, especially training, are supporting environmental management practices at Sheraton Lisboa Hotel & Spa located in Lisbon.

This study also attempts to examine the links between environmental sustainability, financial performance, guest satisfaction, and resource efficiency.

After the observation process, I managed to identify which were the environmental practices implemented by the hotel, performing an analysis of those sustainability measures and then I succeeded to identify the projects that I could develop within the hotel to improve its environmental standards and best practices.

I effectuated a list of possible corrective environmental measures that can be undertaken within the hotel to improve its environmental performance and presented to the director of human resources, also the person responsible for my ongoing internship. The proposed measures were not exhaustive but voluntary.

2.2. Investigation Instruments

To identify and validate the environmental measures undertaken by the Sheraton Lisboa Hotel & Spa, the study adopted a qualitative approach. The primary data of this research was collected by an evaluation of environmental performance indicators performed by the establishment through a checklist. Another research tool was used for the development of this study was the informal interviews with hotel's collaborators to understand better their perception of the implemented environmental policy and the examination of hotel's documentation related to the sustainable management which encompassed environmental statements, energy audit reports, energy and water consumption data sheets.

Through the observation method, I was able to investigate the hotel's sustainable policy, to examine the attitudes and actions of both staff and guests related to the environmental issues and also to analyze all the documents related to this case which helped to ensure a more comprehensive insight of the gathered information.

I also intended to carry out a questionnaire during the internship to the hotel's guests' onsite visits, either at the reception while they are waiting for the check-in or left in the guestrooms. The Questionnaire for the proposed research is attached in Appendix 1 the English version and Appendix 2 the Portuguese version.

Questionnaires represent a value data because it helps to evaluate the guests' satisfaction concerning the environmental and socio-cultural undertakings by the establishment. The results might be helpful for improving the hotel's environmental performance.

To manage to convince the hotel about the service of renting bicycles to its guests, I intend to address this question to guest in the performed survey and if most of the interviewees will present interest in using the bicycles as a means of transportation, then maybe the hotel will take into consideration this service.

The result of the survey could show if the hotel's guests are aware of the environmental issues, as well present the public willingness to support the green initiatives implemented at the hotel to improve environmental quality.

2.3. Study Area

From the beginning, the first hypothesis of this research was a sustainable hotel that was conceived out with this concept, but then after attending a work fair that took place on the premises of the Estoril Higher Institute for Tourism and Hotel Studies, it appeared the opportunity to perform my internship at the Sheraton Lisboa Hotel and & Spa. I found it challenging to develop my research into a mainstream hotel but in the same time appeared a new interest to investigate how a hotel that belongs to a big international chain managed to introduce an environmental policy to the already existing operations and at what extent there are respected the implemented environmental practices, such as waste separation, composting, energy and water efficacy, elimination of disposable packaging and others.

I also aspired to investigate what importance attribute big international hotel chain as Marriott to sustainable practices, knowing that they started to present interest regarding the subject.

Marriott is committed to reduce energy and water consumption, empower their hotel development partners to build green hotels, green their multi-billion-dollar supply chain, educate associates, guests and partners to support the environment and to invest in innovative conservation initiatives including rainforest protection and water conservation (Marriott Environmental Policy, 2007).

"Worldwide, Marriott is investing in innovative, large-scale conservation projects that help address some of the most pressing environmental problems, such as water and rainforest preservation. In China, the need for fresh water is expected to exceed its supply by 25% over the next 15 years. Helping to develop viable ways to preserve the water supply and conserve water in our hotels is one way we can help." J.W. Marriott Jr., Chairman and CEO of Marriott International.

Chapter III. INTERNSHIP. Case Study – Environmental Practices at the Sheraton Lisbon Hotel & Spa

3.1. Profile of the hotel

The History of Sheraton Brand and its classification

The Founders

The origins of Sheraton Hotels begin in 1933, when Harvard classmates Ernest Henderson and Robert Moore purchased the Continental Hotel in Cambridge, Massachusetts. In 1937, they purchased their second hotel, the Stonehaven Hotel in Springfield, Massachusetts. Also, in 1937, Henderson and Moore purchased the Standard Investing Company and made it the company through which they ran their hotels and it was then when they decided to create a hotel chain.

Their goal was to create a network of hotels from which customers could experience a consistent standard of service.

The Name

The chain got its name from the third hotel the pair acquired, in Boston, which already had a large lighted sign on the roof saying, "Sheraton Hotel," which was too expensive to change. Instead, Henderson and Moore decided to call all of their hotels by that name.

The history of Sheraton hotel chain:

1937

Sheraton founders Ernest Henderson and Robert Moore acquire their first hotel in Springfield, Massachusetts.

1944-1947

Henderson and Moore purchased Boston's famed Copley Plaza Hotel in 1944 and continued expanding rapidly, buying existing properties along the East Coast from Maine to Florida. In 1947, Sheraton was the first hotel chain to be listed on the New York Stock Exchange.

1949 -1957

In this period, the Sheraton hotel chain expands internationally and grows rapidly around the world. In 1950, Sheraton expanded internationally, paying \$4.8 million to purchase Cardy Hotels, a chain of six properties in the Canadian provinces of Ontario and Quebec. In 1956, Sheraton paid \$30 million to buy the Eppley Hotel Company, which was then the largest privately held hotel business in the United States, with 22 properties across six Midwestern states. In 1957, Sheraton, which had previously focused on acquiring existing hotels, opened its first newly built hotel, the Philadelphia Sheraton Hotel.

1958-1959

In 1958, Sheraton became the first hotel chain to centralize and computerize its reservations when it introduced Reservatron, the hotel industry's first automatic electronic reservations system. In 1959, Sheraton acquired its first properties outside North America, purchasing four hotels owned by the Matson Lines on Waikiki Beach in Honolulu, Hawaii.

1961-1962

The early 1960s saw the arrival of the first Sheraton hotels outside the US and Canada, with the opening of the Sheraton-Tel Aviv Hotel in Israel in March 1961. In 1962, the Sheraton Motor Inns franchise division was created to operate large highway motels providing free parking.

1963

The Macuto Sheraton Hotel opens in Venezuela, the first Sheraton hotel in Latin America.

1965-1967

In 1965, Sheraton opens the doors to its 100th hotel - The Sheraton Boston. In 1967, Sheraton unveiled Reservatron II, a computer system for personalized reservations.

1970

The company is the first hotel chain with a toll-free 800-number for direct guest access, which displaced two hundred local Sheraton reservation numbers. The number 1-800-325-3535 is still in use today.

1985

Sheraton becomes the first international hotel chain to operate a hotel in the People's Republic of China.

1998

Starwood Hotels & Resorts Worldwide, Inc. acquired Sheraton, outbidding Hilton. Under Starwood's leadership, Sheraton began renovating many hotels and expanding the brand's footprint.

2002

Sheraton elevates the guest experience with the introduction of the Sweet Sleeper™ Bed, which is uniquely designed to eliminate pressure points and increase circulation.

2006

Sheraton makes partnership with Microsoft® to create The Link@Sheraton. An entirely new concept, Sheraton becomes the first in the industry to re-position the hotel lobby as a hub of connectivity, allowing guests to work, relax, socialize or grab a snack.

2008

Sheraton re-imagines the "hotel gym experience," adopting an all-encompassing fitness program, which includes everything from fully equipped, top-of-the-line fitness centers to healthy dining options. Sheraton Fitness has been designed to keep guests at their peak.

2012

Grand opening of the Sheraton Macao Hotel: featuring 3,896 guest rooms the Sheraton Macao is the largest hotel in the Starwood portfolio and the largest hotel to open worldwide in 2012.

2013-2015

In 2013, the Sheraton Hotels & Resorts opens the Sheraton Shantou in China. The Sheraton Shantou marks the brands 100th hotel in Asia Pacific and solidifies its place as the largest global hotel brand in China. In 2015, Sheraton boasts a portfolio of over 435 hotels and 88 resorts in more than 70 countries worldwide.

2016

Starwood Hotels and Resorts and Marriott International complete a merger. Sheraton becomes part of the world's largest hotel company (Starwood Hotels & Resort, 2018).

Marriott Brands

This junction between Starwood and Marriott managed to get together more than 5700 hotels in more than 110 countries.

Now Marriott International administrates 30 brands that are divided into three segments:

- **Luxury:** Extraordinary hotels that elevate every moment of their guest's stay
- **Premium:** Sophisticated experiences with attentive service and facilities
- **Select:** Simple and convenient experiences that offer exactly what guests need

The segments vary from:

- **Classic:** Refreshing perspectives on timeless experiences
- **Distinctive:** Remarkable experiences that give its guests a unique point of view

Below it can be analyzed the classification of Marriott's Brands:

Table 1 The classification of Marriott's Brands

	Classic	Distinctive
Luxury	JW Marriott The Ritz-Carlton St. Regis	The Luxury Collection Bulgari Hotels & Resorts EDITION W
Premium	Marriott Delta Hotels by Marriott Sheraton Marriott Executive Apartments	Autograph Collection Le Méridien Tribute Portfolio Westin Hotels & Resorts Renaissance Hotels Gaylord Hotels
Select	Courtyard by Marriott Four Points by Sheraton SpringHill Suites by Marriott Residence Inn by Marriott Protea Hotels by Marriott Fairfield by Marriott TownePlace Suites by Marriott	AC Hotels by Marriott Aloft Hotels Element by Westin Moxy Hotels

Sheraton's Brands

Along with the basic Sheraton brand, the chain also offers a mid-level lodging experience by way of the Four Points by Sheraton brand. The St. Regis, Luxury Collection and Le Meridien (International) brands offer varying degrees of higher-level lodging, while the W Hotel brand offers more cutting-edge, modern-style hotel services.

Sheraton Hotels of Today

Sheraton Hotels and Resorts is an international hotel chain owned by Marriott International and it is its most global hotel brand. Sheraton currently operates over 500 hotels globally with more than 176,000 opened rooms. And with a global distribution across 75 countries from Asia Pacific, Central and South America, Africa and Middle East, Europe and North America (Marriott International, 2018).

Since their first hotel in 1937, Sheraton Hotels & Resorts has been a transformative figure in the world of travel. With innovative programming, worldwide destinations and with a huge commitment to their guests. As they evolved, adapted and changed with the times, they remain true to the core values that began their journey 80 years ago.

The target competitors of Sheraton Hotels & Resorts are Hilton and Hyatt.

Sheraton Lisboa Hotel & Spa

Hotel's history

Between 1931 and 1933, on the street Marquês Fronteira it was built the luxurious Hotel Aviz Lisbon by the architect Vasco Regaleira. In the 1940s and 1950s Hotel Aviz was home to great names of his time, namely the American actress Ava Gardner, the tenor Enrico Caruso and Eva Perón the First Lady of Argentina from 1946 until 1952. It also had the privilege of hosting the legendary Armenian Calouste Gulbenkian, one of the richest men in the world at that time. The philanthropist settled in Lisbon at the Hotel Aviz in 1942 and stayed there for the next thirteen years.

In addition to hosting great celebrities, the Hotel Aviz was also the scene of great moments of history, because it was in its rooms where the English and German spies met during World War II.

Years later, in 1972, in the place of the luxurious Hotel Aviz, there was build the emblematic Sheraton Lisboa Hotel & Towers. In 2006 the hotel was renovated and changed its name into The Sheraton Lisboa Hotel & Spa.

The Sheraton Lisboa Hotel & Spa features and activities

The Sheraton Lisboa Hotel & Spa is one of the most recognized hotel icons in Lisbon and it is ideally located in the city center.

Table 2 The structure of Sheraton Lisboa Hotel & Spa

Floor	Description
R	Panorama Restaurant and Bar
24 th	Club Lounge and Clube Rooms
20 th – 25 th	Club floor and Presidential Suites on the 23 rd floor
18 th and 19 th	Premium Rooms
3 rd – 17 th	Deluxe Rooms
2 nd	Deluxe Rooms, offices and General Director, Commercial Division, Reservations, Revenue Division, and Conference Room
1 st	Spirito SPA, Sheraton Fitness, outdoor pool and beauty saloon
S	Account Department, IT and Marketing Divisions
B	Banquet Rooms, Springfield I-II, White Plains I-V
0 th	Reception, Concierge, Link@Sheraton, Lobby Bar and Lobby Bistro
-1 st	Restaurant kitchen, Room Service, F&B offices, Conference Rooms: Nashville, Memphis and New Orleans
-2 nd	Employee's lockers and gym
-3 rd	Security post, parking lot, training room, medical post, the department of human resources department, maintenance and purchasing
-4 th	Linen and laundry, department, housekeeping department, refectory and social room, for employees
-5 th	Technical installations

With over 40 years of service experience, the Sheraton Lisboa Hotel & Spa offers spacious guest rooms, free Wi-Fi, 24-hour access to Sheraton Fitness, 1,500 m² of pure wellness at the Spirito Spa, outdoor pool and the acclaimed rooftop Panorama Restaurant & Bar, offering stunning panoramic views of Lisbon and the Tagus River. Banquet facilities, team of experienced event planners and 12 fully equipped multipurpose function rooms on 2 floors with a total area of 1.600 sqm and a capacity of up to 800

delegates, providing the perfect platform to host successful meetings and conventions. The hotel has 369 rooms of which: 1 Presidential, 10 Suites, 74 Club, 34 Deluxe Premium, 51 SPG, 282 Deluxe and 2 Handicapped Accessible Room.

The Sheraton Lisboa Hotel & Spa also has the following programs:

1. Sheraton Signature Sleep Experience

Due to this program Sheraton Hotel managed to improve its guest's wellbeing and their night sleep by offering them a plush mattress, crisp linens, a cozy duvet, and plenty of comfy pillows.

2. Sheraton Club

Club Lounge privileges are: complimentary breakfast at Club Lounge with a beautiful view of Lisbon city, all-day snacks and beverages, free parking and a bottle of wine from Porto.

3. Sheraton Fitness

The hotel helps its clients to stay fit and recover their balance in the gymnasium Sheraton Fitness Center offering them the best of Technogym technology.

4. Sheraton Paired

This program includes the hotel's expertly matched menu with premium wine, small plates with creative and locally relevant dishes perfectly combined with a glass of craft beer.

Table 3 Hotel's Amenities and Services

<p>1. General Room Amenities</p> <ul style="list-style-type: none"> ➤ Air Conditioning ➤ Coffee & Tea Maker ➤ Smoke Detectors ➤ Iron/Ironing Board ➤ Down Pillows ➤ Walk-in Closet ➤ Rollaway Beds ➤ Daily News Paper ➤ Video Check-out ➤ Mini-bar ➤ Sprinklers in Room ➤ Sweet Sleeper Bed ➤ Individual Climate Control 	<p>2. Bathroom Amenities</p> <ul style="list-style-type: none"> ➤ Bathrobes ➤ Bathroom Telephone ➤ Bvlgari Amenities ➤ Deluxe Bath Amenities ➤ Electronic Weight Scale ➤ Grab Bars in Bath Tab ➤ Hairdryer ➤ Make up/Shaving Mirror ➤ Slippers ➤ TV-Speakers 	<p>3. Business Amenities</p> <ul style="list-style-type: none"> ➤ Data Port ➤ Work Desk ➤ Dual Line Phone ➤ Direct Dialing Phone ➤ Speakerphone ➤ Voice mail
<p>4. Internet Access</p> <ul style="list-style-type: none"> ➤ Free access to Wireless and Wired Internet throughout the hotel 	<p>5. Room Entertainment</p> <ul style="list-style-type: none"> ➤ Cable TV Channels ➤ In Room Movies ➤ Lifestyle Magazine ➤ LCD Flat Panel TV ➤ Satellite TV Channels 	<p>6. Other Services</p> <ul style="list-style-type: none"> ➤ 24 Hour Room Service ➤ Handicap Room ➤ Club Lounge ➤ Connecting Rooms ➤ Turn Down Service ➤ Dry Cleaning Service ➤ Wake-up Calls ➤ Valet Service ➤ Parking Space ➤ Business Center

Guest's profile

Every year the Sheraton Lisboa Hotels & Spa registers more than 96.000 stays and host travelers from all over the world. The most common types of guests that the hotel receives are business tourists and holiday tourists, but of course, it also accommodates cultural and eco-tourists.

Even if the hotel tries to target the “green market” the one who care about the environment, at the moment they still continue to be more business travelers oriented. Moreover, the hotel offers amenities like business center with printing and faxing service and meeting rooms, free Wi-Fi in public spaces, lobby PC with internet and printing capabilities which make their customer's stay more productive.

Despite the fact that the hotel's targeted market is mostly business and leisure travelers they still continue to improve their facilities that will eventually meet the needs of different segments of the market.

The Sheraton Lisboa Hotel & Spa belongs to an upper-scale hotel category and its customers are from upper class to middle class with middle and big budget.

The Sheraton brand usually stands for full service being equipped with restaurants, meeting rooms, banquet halls, fitness centers and other outstanding facilities.

Company Values

The values of the Sheraton Lisboa Hotel & Spa are:

- *Take one step further*, by performing actions that create lasting connections and loyalty.
- *Teamwork*, working globally and with all company teams.
- *Doing the right thing*, by respecting the community, employees, owners, partners and the environment.

Their commitment is to create a company that is a great place to work, offering wonderful guest experiences and high incomes to its stakeholders.

3.2. The Sheraton's Environmental Policy

As global travel increases, Marriott International tries to mitigate their business impact on the natural environment and as Sheraton Lisbon Hotel & Spa is owned by Marriott hotel chain then they also have the responsibility to contribute to this commitment.

Marriott International aspires to be the global hospitality leader that demonstrates how responsible hospitality management can create economic opportunities around the world and be a positive force for the environment (Marriott International, 2012).

Marriott International ranks seventh on the Sunday Times "Best Green Companies" list and has received a lot of awards for its commitment to the environment.

In order to continue mitigating impact on the natural environment, Marriott International still need the support from all its brands and fortunately Sheraton Lisboa Hotel & Spa the host entity for my internship decided to get involved and to adopt a sustainable way of managing their business.

Therefore, Sheraton Lisboa Hotel & Spa established an environmental policy, and objectives.

Environmental policy

To ensure an overall frame for the sustainability work of the establishment, Sheraton Lisboa Hotel established an environmental policy, which describes the overall aims and level of ambition for the environmental performance of the hotel in relation to environmental management and environmental training.

The environmental policy means a general statement with a commitment for continuous improvements and monitoring.

In order to constitute a long-term sustainability management system that is suitable to its size and scale, the establishment's environmental policy includes environmental issues as well as having references to social, cultural, economic, quality and crisis management issues.

As the Sheraton Lisboa Hotel is part of Marriott International chain, then I will present both environmental policy, one that belongs to the Sheraton Lisboa Hotel and one that belongs to the Marriott International.

Marriott Environmental Policy

Marriott is committed to integrating leading environmental and social practices into their supply chain. They aim to reduce the negative environmental and social impact of their business activities by focusing on sustainable, responsible and local sourcing.

Marriott has announced a global initiative to impact positive change in our world. Serve 360: Doing Good in Every Direction is Marriott's new platform to have a sustainable and social impact on the communities it serves, the planet and the people around the world.

"As the global hospitality leader with properties and associates across 125 countries and territories, Marriott International has a global responsibility and unique opportunity to be a force for good in all aspects of our business – from helping to reduce carbon and water use to providing our associates with human trafficking awareness training," said Ray Bennett, Chief Global Officer, Global Operations at Marriott International and Serve 360 Executive Leadership Council Co-Chair.

The company has four pillars to achieve the platform's goals:

1. Nurture Our World – Advancing the resiliency and development of our communities.
2. Sustain Responsible Operations – Reducing the company's environmental impacts, sourcing responsibly and building and operating sustainable hotels.
3. Empower Through Opportunity – Helping people prepare for jobs in the hospitality industry.
4. Welcome All & Advance Human Rights – Creating a safe and welcoming world for associates and travelers alike.

"Building off our 2007 Sustainability goals, Marriott is proud to issue our next generation of goals, inclusive of social and human rights targets to address some of the world's most pressing challenges," said Tricia Primrose, Global Chief Communications Officer at Marriott International and Serve 360 Executive Leadership Council Co-Chair.

Marriott also supports US Congressional action to address climate and energy challenges, including reductions in greenhouse gas emissions through energy conservation, promoting cleaner energy alternatives and protecting the world's rainforests (Marriott International, 2007). Since 2007, the electricity consumption at Marriott headquarters has dropped by an accumulated of 9.04%.

Sheraton Environmental Policy

“At Sheraton Lisboa Hotel & Spa, we believe that economic growth and the well-being of society are closely linked to the health of the environment. This way, we assume our responsibility for environmental stewardship and are committed to integrate environmental practices and principles of sustainability into our business strategy.”
(Sheraton Lisboa Hotel & Spa Environmental policy, 2018)

Through collaboration with hotel owners, franchisees, suppliers and business partners, the establishment is actively working to reduce the environmental impact of its business activities and continually improve environmental practices aimed to:

- preserve natural resources;
- minimize waste generation and pollution;
- improve external environmental quality;
- establish and declare important indicators of environmental performance; and
- increase environmental awareness among its employees, guests and communities.

Environmental objectives

The objectives reflect the concrete work towards fulfilling the environmental policy and also includes specific goals that are going to be reached in the coming 1-3 years.

Below are mentioned the environmental objectives of the Marriot International which are to be accomplished in the next 7 years by its most brands and for that to be achievable the Sheraton Lisboa Hotel & Spa as partner of this hotel chain also established its own objectives that will certainly contribute to the main goals of Marriott International.

Marriott International- 2025 Sustainability & Social Impact Goals

Nature:

- GOAL: By 2025, contribute 15M hours to support our company priorities and community engagement strategy. *Youth Engagement*: 50% of our volunteer hours will serve youth, including those at risk and disadvantaged, by developing their skills, employability and supporting their vitality

- GOAL: By 2022, 80% of our managed hotels will participate in community service activities annually
- GOAL: By 2025, 50% of our franchised hotels will participate in community service activities annually
- GOAL: By 2022, 25% of all reported volunteer hours will be skills-based

Empower:

- GOAL: By 2025, invest at least \$5M to increase and deepen programs and partnerships that develop hospitality skills and opportunity among youth, diverse populations, women, people with disabilities, veterans and refugees
- GOAL: By 2025, achieve gender representation parity for global company leadership

Sustain:

- GOAL: Reduce environmental footprint by 15% | 30% | 45% across the portfolio by 2025 (from a 2016 baseline; for water/carbon/waste on an intensity basis)

Water: Reduce water intensity by 15%

Carbon: Reduce carbon intensity by 30%

Waste: Reduce waste to landfill by 45%. Reduce food waste by 50%

Renewable energy: Achieve a minimum of 30% renewable energy use

- GOAL: 100% of MI hotels will have a sustainability certification, and 650 hotels will pursue Leadership in Energy and Environmental Design (LEED) certification or equivalent by 2025
- GOAL: Sustainably source 95% in our Top 10 priority categories by 2025

Supplier Requirements:

- » By 2020, require all contracted suppliers in the Top 10 categories to provide information on product sustainability, inclusive of social and human rights impacts
- » By 2025, require all contracted suppliers to provide this information

Sustainable Sourcing: By 2025, sustainably source 95%, by spend, of its Top 10 categories

Local Sourcing: By 2025, locally source 50% of all produce, in aggregate (measured by total spend)

Furniture, Fixtures & Equipment (FF&E): By 2025, ensure that the Top 10 FF&E product categories sourced are in the top tier of the Marriott Sustainability Assessment Program (MSAP)

- GOAL: By 2020, all properties will have a Serve 360 section on the marriott.com website with hotel impact metrics

Welcome:

- GOAL: By 2025, 100% of associates will have completed human rights training, including on human trafficking awareness, responsible sourcing and recruitment policies and practices
- GOAL: By 2025, enhance or embed human rights criteria in our recruitment and sourcing policies and work with our industry to address human rights risks in the construction phase
- GOAL: By 2025, promote a peaceful world through travel by investing at least \$500,000 in partnerships that drive, evaluate and elevate travel and tourism's role in cultural understanding (Marriott International, 2018).

Sheraton's Objectives for 2018-2019

The Sheraton Lisboa Hotel & Spa established eight action points within different areas of operation of the establishment.

Environmental:

- Help reduce the water consumption with 3%
- To reduce energy consumption by 3%
- Increase the recycled waste with 4%
- To increase the number of clients with 5% to join the program Make a Green Choice

Social responsibilities:

- Support all actions related to the UNICEF project
- Support one project in Lisbon city
- Create a green mentality inside the hotel

3.3. Review of the Measures Taken by the Hotel to Reduce Their Environmental Impacts

Energy Efficiency

The hotel had undertaken some measure to reduce its energy consumption like: using energy saving bulbs (LED), automatic turning off air-conditioners, automatic light switch and many others. Forward, I am going to describe each of them with more details.

The hotel registers the use energy every month

In order for the establishment to lower its environmental footprint by reducing its energy consumption and thereby cut costs, the establishment records its total energy consumption every month. If any major changes in energy consumption occur, this helps them to immediately investigate the reason for that different energy consumption and to implement corrective actions.

The hotel uses energy-efficient light bulbs

As light bulbs constitute a significant amount of energy consumption, the establishment, changed them into LED bulbs in order to lower the environmental footprint. So, they installed it in guest rooms, public areas (including lobby, restaurants, conference area, halls, etc.) and the administrative areas.

Normally, energy efficient light bulbs are more expensive than non-energy efficient light bulbs, but besides being more energy efficient, these light bulbs last much longer and do not need replacement as often as non-energy efficient light bulbs. As a result, this reduces the costs in the long run, and it also reduces the working time spent on replacing light bulbs.

All windows have an appropriately high degree of thermal insulation

As the establishment is located in an area with a warm and hot climate they have sun-reflecting material on the windows, this help them to reduce their energy consumption. Because if windows do not have an appropriate thermal insulation, they can be a significant source for high energy consumption.

The hotel has installed a heat recovery system (refrigeration systems)

Larger energy consuming machines and equipment often produce excess heat. And to lower the environmental footprint through reducing energy consumption, the establishment has a heat recovery system.

In other words, the hotel has coolers with heat exchangers for utilizing the heat from the cooling process. And as a result, the application of this measure has led to a 15,95 % savings of gasoil for hot water heating during the coldest winter days.

The establishment has a key card system that turns off the light and electrical appliances when guests leave their room

The “key card” system shut off the electricity immediately after the key card is taken out of the holder. In these cases, the establishment does not provide more key cards than needed and does not encourage the guests to keep an extra card in the holder when leaving the room.

This system ensures that the establishment reduces its environmental footprint through lowering its energy consumption and thereby cut costs.

There are automatic systems installed in public areas for energy-efficient lighting

For the further lowering of the environmental footprint through saving of energy and thereby cutting costs, the establishment has an automatic system for energy-efficient lighting in the public areas, like areas with conference facilities, swimming pool, gym or spa, as well as the restaurant and bar areas.

The automatic system installed is in the form of motion detectors, as for example, the lights are automatically turned off in these public areas during periods of non-use, the hand dryer also has a motion detector, then the air-conditioning and heating automatically switches off when windows are open.

The hotel is equipped with computers, printers and copy machines that switch to energy saving mode and turn off automatically

The establishment uses computers, printers and copy machines that switch to an energy saving mode within a short time of non-use. And as the energy saving mode is also energy-consuming, then some of the equipment like copy machines, printers and paper shredders automatically turn off completely after a longer time of non-use.

Water Efficiency

Hotel reports a variety of efforts regarding water efficiency, namely leakage prevention/repair, use of water saving devices in the toilets, showers and taps. Furthermore, I am going to describe these measures separately with more details.

The total water consumption is registered every month

This step is fundamental if the establishment wants to reduce its environmental footprint and thereby cut costs. If any major changes in water consumption occur, then this measure give the establishment the possibility to immediately investigate what may be the reason of those changes which then allow them to implement corrective actions.

The hotel has installed low-flow shower heads; faucet aerators and toilets with dual flush in guest rooms

The shower heads installed by the hotel do not exceed 9 liters per minute and the restricting devices installed on the tap also do not exceed 8 liters per minute. The reduced water flow is achieved by mixing water with air in shower and tap aerators. And due to dual flush toilets, the water flow does not exceed 6 liters per minute.

The water flow from taps and toilets in public areas does not exceed 6 liters per minute and have motion-control fixtures

In public areas there are dual flush toilets, detection sensors and “push” buttons which contributes to reductions in water consumption.

These standards help the hotel to reduce its water consumption and thereby cut costs without compromising the comfort of the guests and staff.

Wastewater is treated in accordance with national and local regulations

In order to reduce its environmental footprint, the establishment do not discharge its wastewater untreated. That is why the hotel treats its all wastewater in accordance with national legislation. After treatment, the treated wastewater is released safely with no adverse effects on the local population and the environment.

The establishment makes regular checks to see if there is no leak in the swimming pool

Leaks in outdoor or indoor swimming pools can significantly increase the environmental footprint through a higher water consumption and thereby create additional expenses.

Waste Management

The hotel is also trying to implement measures to reduce its waste, such as:

The establishment separates its waste

First of all, the waste that the establishment is separating is paper, cardboard, metal, cans, glass, plastic, cooking oil, toner cartridges, crockery, wood, batteries and light bulbs.

The hotel also has its own machine for compressing the cardboard, this helps them to reduce the amount of paper before sending it to the waste management facility.

Therefore, the hotel managed to reduce its general waste with 5.76% since 2015, by increasing the rate of recycling.

As a result, in 2017 the establishment recycled 21,880 tons of glass; 5,700 tons of plastic; 29,200 tons of paper and cardboard; 5,700 tons of metal containers; 0,680 tons of wood; 0,240 tons of light bulbs and 0,040 tons of batteries (Appendix 3).

The waste is collected and handled by a private entity “TRIU” which makes sure to treat safely the separated waste. The hotel also pays an extra transport service to this company “TRIU”, so they could come every morning and pick up the separated waste which will be eventually submitted to treatment.

The waste separation helps the establishment to lower its environmental footprint and also to save money because for every ton recycled they are being paid and also if they increase the recycling rate then as a result they reduce the urban solid waste which means it will reduce their annual payments for waste service.

Guests have the possibility to separate waste into categories

In order to create awareness among guests on waste separation and recycling, the establishment offers the possibility for guests to separate their waste. The recycling bins for guests are placed in the guest rooms and in public areas.

The establishment returns the plastic boxes for fruits and vegetables to their suppliers

In order for the hotel to reduce the amount of waste produced, they return the plastic boxes designed for transporting fruit and vegetables to their suppliers.

Sustainable Food and Beverage

The establishment purchases products that are organic, eco-labelled and locally produced

The establishment therefore purchases food and beverage products that are organic, eco-labelled and some of them are even locally produced.

Here are presented some example of these products:

- Almond and soya milk from “Provamel” which is organic and eco-labelled with EU organic farming and with CO2 Neutral certificate.
- Hulled barley from “Naturefoods” which is organic and eco-labelled with EU organic farming.
- Kamut grain from “Celnat” which is also organic and eco-labelled with EU organic farming and AB Certificate
- Red wine from “Elpenor” which is organic and locally produced from the combination of the four main grape varieties of the Dão region.
- Local oranges that are from Algarve region.

By purchasing local products this help the hotel to lower its environmental footprint from reduced transportation and therefore it also stimulates the local economy. And this is also valid to purchased products with eco-labels because this as well help the establishment to reduce its environmental impact.

The establishment takes initiatives to reduce its food waste

In order for the hotel to reduce its food waste from landfill, they decided to give away the remaining food from lunch and dinner to the Re-food Movement. They also give five meals and three liters of soup every day to the “*Junta de Freguesia de Avenidas Novas*”.

This help the hotel to reduce its environmental footprint and at the same time they help fighting hunger from its local community.

Social Responsibility

The establishment provides access for people with special needs

The hotel provides access for people with special needs, to the entrance and reception area, conference facilities, restaurant, public sanitary facilities and guestrooms.

The establishment supports green activities and initiatives for social community development

To create awareness about the establishment's corporate social responsibility they are trying to get involved in supporting various green activities or initiatives for social community development including, education, health, sanitation, and infrastructure.

The last event the hotel took part it was an outdoor activity where the main goal was to restore a lunch park in Sintra. This social event in supporting local infrastructure was organized by Marriott in collaboration with *Instituto da Conservação da Natureza e das Florestas* (ICNF). The involved parts for the lunch park restauration were: Lisbon Marriott Hotel, ICNF, Sheraton Lisboa Hotel & Spa, Penha Longa Resort Hotel and Pine Cliffs Hotel (Appendix 4).

Campaign Make a Green Choice

Sheraton Lisbon Hotel&SPA implemented a linen reuse program. Therefore, the hotel gives its guests a card with information about this campaign. Provided that, guests decide to participate then they have to decline Housekeeping services by hanging the card on their bathroom door before 2:00 a.m. and if they do so the hotel offers them a 5€ credit voucher where they can spend it in the hotel's restaurant or 500 Starwood Preferred Guest Starpoints. Or they can also choose to reward others by donating the Starpoints to UNICEF. In case the guests would prefer to become a member of the Starwood Preferred Guest program, then they will need to access the spg.com or they could ask hotel team for assistance and therefore they will be able to collect the points. But if the guests do not want to participate, then they have to place the card on their bed and leave the towels on the floor.

This program is valid only for guests who stay more than two days at the hotel.

The rewards that the guests will receive act as an incentive but also remove any cynicism from the customer – so they understand that not changing linen is the hotel's environmental policy, rather than simply a money saving scheme.

So, by implementing a linen reuse program, this will help the hotel to save water, prolonging the fabrics life and it will also save housekeeping staff time. And another important observation is that by reducing the water consumption it will also reduce the waste discharge in the environment.

The hotel uses environmentally friendly cleaning products

“The different stages of the life of a product – manufacturing, marketing, use and disposal – all have an impact on the environment. The purchasing of green products helps to minimize these impacts (Zein et al., 2008).”

To lower the environmental footprint by reducing the amount of chemicals used, the establishment uses only environmentally friendly cleaning products from Ecolab which is a global leader in water, hygiene and energy technologies. The hotel chose Ecolab products in order to keep their environment clean and safe and also to achieve sustainability goals.

Environmental Management

The establishment has an environmental policy

To ensure an overall frame for the sustainability work of the hotel, they formulated an environmental policy. It describes the overall aims and level of ambition for the environmental performance of the hotel.

Including environmental issues such as social, cultural, economic, quality and crisis management issues.

The hotel has objectives and an annual action plan regarding sustainability

The objectives and annual action plan reflect the concrete work towards fulfilling the environmental policy and includes specific objectives to be reached in the coming 2 years.

The stationery and brochures ordered are eco-labelled and recycled

The brochures, business cards, business stationery and greeting cards are ordered from Papyrus – a company with an environmental management system, which produces its products from recycled paper and has the following eco-labels: FSC-label, European Ecolabel (EU Flower) and Elemental Chlorine free (ECF).

Awareness through Collaborators

The hotel display images through administrative areas with information about energy and water saving encouraging the staff to get involved in hotel's environmental policy.

The award Green Key

The hotel has achieved the Green Key award, which is the leading standard for excellence in the field of environmental responsibility and sustainable operation within the tourism industry. They obtained it in 2015 for the first time and in 2018 for the second time.

3.4. The Environmental Challenges for Sheraton Lisbon Hotel & Spa

Sheraton Lisboa Hotel & Spa is a big establishment that generates a lot of waste and consumes a lot of natural resources. This means that the hotel has a huge impact on the environment, however, it also has a great potential to reverse the situation and become an eco-friendly hotel by changing its managerial operations in favor for the environment.

Moreover, in order to reduce the hotel's impact on the environment it needs to improve some of its green measures or even implement new ones for a better performance.

Although I believe these new measures would be huge challenge for the hotel because for that to be accomplished it would be necessary the creation of a "green team" which will monitor closely the transformation process and it will also require a great investment at the beginning.

Furthermore, during my internship at the Sheraton Hotel Lisboa & Spa I was able to understand the environmental challenges of the hotel, which will be analyzed below.

- **Vertical Vegetable Garden**

For the hotel to have a vertical vegetable garden it would be a huge accomplishment. This would be difficult to achieve, because the hotel would perceive this as an expense and because it would not be profitable. Another reason would be that the hotel has little space and they certainly would not want to waste it for a vegetable garden.

But despite all these the hotel could serve fresh vegetables or fruits in its restaurants and by doing that it would certainly gain the admiration and trust of its clients.

- **Become a Carbon-Neutral Hotel**

For Sheraton Lisboa Hotel & SPA to become a carbon-neutral hotel it would be one of its biggest challenge because this would involve changing all its management operations

and it would also involve the creation of a “green team” in order to achieve this huge transformation of the hotel.

Becoming a carbon-neutral hotel this would mean to use 100% of electricity provided by renewable sources and to reduce their energy use as far as possible – through things like solar panels and then pay to offset any energy is used by supporting carbon-reduction projects, such as forestry programs or schemes that capture carbon from the atmosphere and store it underground. So, another difficult part of this process would be the acquisition of expensive technologies which will help the hotel to contribute to climate change mitigation. Moreover, this will also involve using local suppliers to cut down on transportation emissions, providing its employees sustainable transport like hybrid vehicles for work purposes or bicycles to use them on their way to work. And the highest level of performance in this sense would be the hotel to take care of its guest’s emissions by creating a reforestation project to plant new trees. To offset guest’s air travel. This would decarbonize their entire operation. Moreover, the hotel could get a zero-carbon emission certification as a result of using clean energy.

- To provide bike tours for its guests

It would be a huge challenge for the hotel to create its own bike tours through Lisbon. The easiest part of this is that Lisbon is a beautiful city that can be discovered by bike and the tours could begin with the Park of Nations and end at the Guincho beach. Guests could obtain information about this service at the hotels’ reception or via TV monitors in the public areas. The provided information should include all about the natural surroundings, local culture, cultural heritage and local biodiversity, as well as explaining appropriate behavior while visiting these areas.

But still, there could be something more challenging than that like creating an application with local green guides, hiking and biking guides along with information about the local environment and conservation efforts. This would strengthen the environmental profile of the establishment.

- To use as little as possible water from the public supply for its daily operations

This would be another challenge for the hotel because to achieve that it would mean to use water from desalination and from rainwater harvesting. Therefore, the hotel is not yet

ready to invest in these types of technologies because the expenses are too high, and the returns are in medium to long-term.

- To provide tap water to guests in restaurants, meeting rooms and banquet rooms

To lower the environmental footprint created in the process of producing bottled water, the establishment could offer tap water to guests in restaurants, meeting rooms, banquet rooms and guest rooms.

As the quality of water from the hotel does not comply with the national authorities' standards for tap water, the hotel needs to find a water company serving in Lisbon, such as EPAL or PMS Coffee Solutions.

Providing bottled water at the hotel would be indeed a challenge for them because they already had it implemented in their hotel and after a year they decided to send back the equipment to the supplier because the service was not profitable. And the real reason it was not lucrative it was because during big events held at the hotel they did not have time to fill all the bottles with water and they always ended up using water bottles from "Luso" a national company water supplier which eventually proved to be more convenient.

- Fighting poverty

Another big challenge for the Sheraton Lisboa Hotel & Spa would be to fight poverty. It would be challenging because they would have to get involved in a lot of social projects and this would require a lot of their attention, time and money. In this sense there could be developed several projects, such as:

- I. It could be a water project where the hotel would sell filtered water in recycled glass bottles in its restaurants and bars. Then 10% of revenues could be donated to non-organizations like Pump Aid or Whole World Water that will fund the installation of water pumps in some of the poorest communities in the world that are strongly affected by this resource shortage. This way the hotel could contribute to the delivery of safe and drinkable water to those people. This could also serve as a way of awareness to the hotel's guests about this region's conditions and encourage them in water saving actions developed at the hotel.
- II. Another project they could develop in this sense would be to collect the used bar soaps or bottles of liquid soap and then to recycle them. Whereupon, to distribute them to vulnerable people in developing countries, this will contribute to the protection of the environment, preservation of natural resources, cutting costs and

improving others life. However, a bigger challenge would be the hotel to organize events, where inviting other hotels from the Lisbon city trying to sensitize them and encouraging them to collect all their used soaps bar for charity reasons. Then after the collection of all the discharged soap bars, Sheraton Lisboa Hotel could take care of their recycling process and then distribute the new obtained bar soaps to people in need from countries like Afghanistan, Bangladesh, Dominican Republic, Ecuador, Ghana, Guatemala, Haiti, Kenya, Uganda, Cameroon and South Sudan. This way they would increase even more their positive impact on the environment and improve the lives of thousands of people in need.

Because of not washing hands with soap this leads to diarrheal diseases and pneumonia, which together are responsible for more than 3.5 million child deaths each year.

- III. Another action they could develop regarding social responsibility would be to donate old furniture and goods from the hotel to charities. There also could be organized campaigns twice in a year for collecting goods, where the hotel encourages its staff to bring all their unneeded stuff to be given away to people in need.

- Better Management of Natural Resources

This would be another challenge for the hotel which would imply the creation of a “green council” that would be responsible for finding and implementing innovative environmental measures, destined to reduce the use of natural resources, such as water, oil and gas. Moreover, they would also manage to reduce the hotel’s environmental impact.

- Environmental Education

Zein et al. (2008) supports that “Environmental Education arises as a response to the environmental crisis. Starting in the sixties, when the established growth model was challenged and its impact on the environment was denounced, numerous diagnoses of the environmental crisis have been carried out. Human beings are gradually beginning to have a new view of their environment, and a new perception of the humankind-society-environment relationship is gaining ground.”

Environmental education is one of the hotel’s biggest challenge at the moment because this would mean ongoing training of their employees. And that is something the hotel cannot afford because it would imply the creation of a new department with staff responsible for environmental management. Moreover, the person responsible for the new

department shall be properly qualified to implement environmental best practices in accordance with regional and international standards.

This would be a challenge for the hotel because the hotel has a huge gap in environmental training, especially about the waste and its importance of recycling. That is because even if guests are separating their waste inside their room, the housekeeping team will eventually put the waste in the same trash bag, due to a lack of training and equipment. For a better performance, there would be necessary ongoing staff training and a person in charge to monitor the progress monthly or even weekly.

- To install dispensers for shampoo and shower gel in guestrooms

To have dispensers for shampoo, conditioner, shower gel and soap installed in the bathroom's guestrooms it would be a huge challenge for the hotel, they are not yet ready to move to this level of environmental management because they believe this will low their prestige towards its clients. By replacing the individually packaged single dose containers of shampoo, shower gel and soap with dispensers will help the hotel to lower its environmental footprint, reducing the amount of unnecessary waste.

To conclude, the Sheraton Lisboa Hotel & Spa has a lot of environmental challenges to face in case they would like to be entirely committed to sustainability. This would involve high costs to finance the implementation of "green" technologies and other green measures, with a moderate to long payback period. Instead, this management system will guarantee the reduction of environmental impact from their activity, reduction in costs, a differentiated service for guests and it will also increase their competitiveness in the marketplace.

Chapter IV. Analysis and Interpretation of Research Results

4.1. Evaluation of Environmental Performance Indicators at the Sheraton Lisbon Hotel & Spa

According to Silva (2017) in order to accomplish an inventory of resources can be used both direct and indirect sources. Therefore, in present investigation was applied a direct method to elaborate the inventory of the environmental performance indicators of the Sheraton Lisbon Hotel & Spa which implied the presentation at the research site. Silva (2017) also argue that structuring the information gathered allows the company to evaluate its tourism development potential which result from the resources it already possesses or could serve as a pillar for future development. Consequently, in this research the inventory helps to identify the hotel's sustainability level and also its potential to sustainable development.

It is essential to develop indicators, because this show humans how much progress has been made toward sustainability (Mill and Morrison 1998).

In order to achieve this inventory, there was used sources as: GSTC Criteria Hotel and Green Key hotel criteria slightly adapted to this research as during the internship at the hotel was identified some criteria which I found them important for the accomplishment of this evaluation.

In this paragraph it will be presented the evaluation of hotel's environmental performance indicators having as a main objective the presentation of the hotel's environmental management and the establishment of the hotel's position among sustainable hotels.

These indicators can enable to evaluate the hotel's sustainability development and therefore to identify if there is necessity to improve the hotel's environmental management. These are also key indicators for the new environmental development projects.

Table 4 below presents the gathered data about sustainability indicators in order to be analyzed further and to fulfill the project's objectives.

Table 4 Sustainability Indicators Checklist

Environmental Concept	Sustainability Indicators	Answer
Energy consumption	1. The hotel uses renewable energy (e.g., solar, wind)	No
	2. The establishment has a key card system that turns off the light and electrical appliances when guests leave their room	Yes
	3. Installed LED bulbs	Yes
	4. Automatic systems are installed in public areas for energy-efficient lighting (on-off sensors)	Yes
	5. Air-conditioning and heating automatically switch off when windows are open	Yes
	6. A heat recovery system is installed (refrigeration system)	Yes
	7. The establishment uses low-energy-consumption electronic equipment	Yes
	8. Computers, printers and copy machines switch to energy saving mode and turn off automatically	Yes
	9. Computers, printers, copy machines and domestic appliances have an eco-label	Yes
	10. Energy efficient laundry	No
	11. Fat filters in the exhaust are cleaned every year	Yes
	12. The surfaces of the heating and cooling exchanger of the ventilation plant is cleaned every year	Yes
	13. Architectural design makes use of natural illumination with glass walls and open, well-ventilated environments, thus saving on artificial light and air conditioning	Yes
	14. The establishment has window covering or glazing to reduce solar gain	Yes
	15. Window insulation	Yes
	16. Adequate insulation of walls	Yes
	17. An energy audit is carried out every five years	Yes
	18. Calculate environmental footprint	Yes
Water Consumption	1. Uses low-flow shower heads in guestrooms	Yes
	2. Faucet Aerators in guestrooms	Yes
	3. Low-flow or dual flush toilets in guestrooms	Yes
	4. Treats sewage before sending it to area creeks and rivers	Yes
	5. Uses rainwater for laundry or pool	No
	6. The wastewater is reused (after treatment)	No
	7. The water flow from taps and toilets in public areas does not exceed 6 liters per minute	Yes

	8. Automatic or motion-control fixtures in common areas	Yes
	9. Appropriate irrigation timing for the garden	Not Applicable
	10. The swimming pool follows nationally approved standards on water quality, health, and safety	Yes
	11. Regular checks show that there is no leak in the swimming pool	Yes
Waste	1. The establishment has a solid waste management policy	Yes
	2. The hotel composts the organic waste	No
	3. Guests have the possibility to separate waste into categories	Yes
	4. Has installed fixed containers for shampoo, conditioner and soap replacing disposable packaging in guest's rooms	No
	5. Has installed fixed containers for soap in common areas	Yes
	6. Soap and shampoo provided for the guests have a nationally or internationally recognized eco-label	No
	7. The hotel avoids the single dose packages for cream, butter, jam etc.	No
	8. Hazardous solid and liquid chemicals are stored in separate containers preventing leaking and contamination of the environment	Yes
	9. Each bathroom has a waste bin	Yes
	10. The establishment excluded disposable cups, plates and cutlery from the pool areas, spa and other areas	No
	11. The establishment uses biodegradable disposable cups, plates and cutlery	No
	12. Uses carpets, drapes, light fixtures, and other room furnishing made of recycled materials	No
Hygiene and Cleaning	1. Hotel has a linen reuse program with signs in the rooms informing guests that sheets and towels will only be changed upon request	Yes
	2. The chemical cleaning products for daily use have a nationally or internationally recognized eco label	Yes
	3. Uses paper towels, facial tissues and toilet paper made of non-chlorine bleached paper or awarded with an eco-label	Yes
	4. The establishment uses eco-labelled dishwasher and laundry detergents	Yes
	5. Uses fibre cloth for cleaning to save water and chemicals	Yes
	1. The establishment purchases food and drink products that are organic, eco-labelled or fair-trade labelled	Yes
	2. Purchases local products	Yes

Food and Beverage	3. The establishment takes initiatives to reduce its waste food	Yes
	4. A vegetarian alternative menu is proposed in the restaurant	No
	5. The hotel filters his own water and bottles it and then offers it to guests in restaurants, in meeting rooms and banquets	No
Indoor Environment	1. The restaurant is non-smoking or at least have a non-smoking section	Yes
	2. A minimum of 75% of the rooms are non-smoking	Yes
	3. The establishment has a personnel policy concerning smoking during working hours	Yes
Green Areas	-----	Not Applicable
Social Responsibility	1. The hotel provides access for people with special needs	Yes
	2. Support local charities or volunteer in community	Yes
	3. Endangered plants and animals, historical and archaeological artefacts are not sold, traded, or displayed	Yes
	4. Material/supplies that are no longer used are collected and donated to charitable organizations	Yes
	5. The establishment provides information about the nearest place to rent or borrow bicycles	Yes
	6. The hotel has bike rental services for its guests	No
	7. Has a vertical vegetable garden	No
	8. Provides activities for raising awareness focused on sustainable development, environment and nature	No
Environmental Management and Awareness	1. The establishment has ongoing green training for employees	No
	2. Has information about energy and water saving at visible places for guests	No
	3. The establishment provides its guests with the opportunity to evaluate its environmental or socio-cultural performance	No
	4. The hotel has a Green Council	No
	5. Has a sustainable policy and formulates environmental objectives	Yes
	6. The stationery and brochures produced or ordered by the hotel are eco-labelled or recycled	Yes
	7. The establishment takes initiatives to reduce the use of paper in offices, guest rooms and meeting rooms	No
	8. The establishment has suppliers which are eco-certified	Yes
	9. Has obtain at least one environmental award or certificate	Yes
	10. The use of environmentally friendly means of transportation by the staff is encouraged	No

Source: GSTC Criteria Hotel (2016) and Green Key hotel criteria (2019-2020)

4.2. Analysis of Environmental Management at the Sheraton Lisbon Hotel

Developing the internship at the hotel Sheraton Lisboa Hotel & Spa I was able to identify the environmental measures already implemented at the hotel and suggest the new potential environmental projects. Moreover, I developed a plan including the missing environmental measures that could be implemented at the hotel and afterward communicated it to the director of human resources, the person responsible for my ongoing internship.

The Sheraton Lisboa Hotel & Spa had accomplished tremendous results regarding environmental management by changing the way of operating its business in a more sustainable approach. The hotel implemented environmental measures, such as the installation of LED light bulbs, waste recycling, installation of low-flow showerheads and tap aerators. Besides, they upgraded the heating and air conditioning in the hotel when renovated it in 2006 and installed a key card system that turns off the light and electrical appliances when guests leave their room.

Forward, it will be analyzed the hotel's environmental performance, as well as hotel's challenges in a more detailed approach.

To begin with, it is significant that the hotel has an environmental policy and a Green Key Award. Still, I believe they performed half of the task, because they left aside the communication part, I also was able to conclude this after the analyzation of the evaluation of hotel's environmental indicators from the table 4. The establishment need to focus more on increasing environmental awareness, by informing its employees and guests about the hotel's environmental initiatives, otherwise the hotel would not succeed a good performance in environmental sustainability without their support. So, first of all I believe hotel's environmental policy is preferable elaborated in cooperation with its employees and organized in a way that includes both contributions from the management and the staff. After performing the environmental policy, it should be available for all the collaborators, being displayed either on the notice board of each department or on the hotel's official website.

I am only saying this because as I remarked the environmental policy was not displayed anywhere in the hotel and because some of the staff did not even know the hotel has an environmental policy.

The hotel needs an action plan to increase environmental awareness through its guests and collaborators I believe this is crucial for its environmental performance. Environmental practices are indispensable for organizational efficacy (Agarwala, 2003), and inefficiencies may compromise environmental management of any company (Del Brío, et al., 2008). I assume there is no green future without the involvement of human resources.

As an environmentally friendly hotel, they need to provide information regarding environmental preservation through its guests and collaborators as well as informing them about its environmental initiatives. I believe this is indispensable to increase the hotel's credibility regarding its implemented green operations. This type of information could be displayed on the website of the establishment as well as on its social media. The reason I believe the hotel should communicate more to their guests about its environmental policy is because otherwise the guests will not believe in the implemented environmental measures like reuse linen program or water reducers.

By implementing environmental initiatives without explaining the reasons for its guests will leave them cynical because the guests often think this is just a cost-saving scheme for the hotel. The most successful environmental management policies are those that allow guests to be informed about the hotel's environmental initiatives.

Another gap I have identified in the hotel's environmental management was that they do not have a qualified person to control the ongoing green projects implemented inside the hotel. The person responsible for this task was the Director of Human Resources, which unfortunately was too busy with her own department's tasks, which eventually ended up with no time to attend any environmental workshops or to administrate a proper management of environmental practices.

That is exactly why it is essential for the hotel to conceive a "green team" that will be responsible for the constant improvement of its environmental sustainability. Besides, the environmental manager should receive ongoing training concerning the environment and other sustainability issues so that suitable and possible solutions for the establishment can be determined and implemented.

The “green team” is the one responsible for informing the staff and collaborators about the hotel’s activities regarding the environmental protection.

Environmental training should be on the list of hotel’s action plan, something that was not applied in case of my host institution, as there is hold only one-off event, instead of ongoing training. According to Bread (1996) emphasize that the importance of environmental training began to be discussed in the 1990s. Sammalisto and Brorson (2008) affirmed that environmental training serves two purposes: (1) to teach employees the company’s environmental policy; and (2) to encourage individual employee behaviors that establish a more conscious and permanent relationship with the environment.

They should also hold regular meetings with the staff to discuss the hotel’s environmental achievements and future improvements. Encouraging staff to put forward their own suggestions regarding prudent use of water or energy efficiency, such as, how many times to flush the toilet when cleaning, turn off the unnecessary lights or not to leave taps running, will make them more involved in these projects because it will come as something natural, not compulsory. Then, when reporting the progress back to the staff, the hotel could reward their success by offering something special for lunch or dinner.

It is essential to keep the staff informed and involved in the environmental work of the establishment because they are the key to the hotel’s sustainability future.

And because this aspect is omitted from the hotel’s environmental management this led to another difficulty - guests become skeptics about the hotel’s intentions to preserve the environment. After the conversation, I had with the director of human resources I understood that some guests complain about the low-flow shower heads and they believe this is another hotel’s scheme to save money. I assume if the guests would be informed about the hotel’s environmental achievements they would understand the hotel’s commitment to the environment.

Another important aspect regarding environmental management that the hotel neglects is the staff training. Because even if the hotel has an ambitious environmental policy and the staff does not understand the philosophy behind it, then it cannot achieve high performance in environmental sustainability. Usually, good intentions are ruined through poor staff training. As was the case of the Sheraton Lisboa Hotel & Spa, where I was able to notice a discrepancy in staff training, analyzing it in the following example. So, even if the guests and collaborators were performing the waste separation inside the hotel, the housekeeping team collected the separated waste and eventually put it all together in the

same bag. Therefore, as a result, employees were not able to perform their task correctly, due to the lack of environmental training and appropriate equipment.

Moreover, if hotel guests have dutifully followed a request regarding the waste separation to conserve the environment through recycling, they would feel disappointed to discover that in the end, all the waste goes into the same bag trash.

About the recycling system inside the hotel, I would prefer to develop more this subject. Hence, I marked with “Yes” in Table 4 – “Sustainability Indicators Checklist” that the establishment has a solid waste management policy, I would like to add that they indeed implemented the recycling system inside the hotel except it is poorly managed.

The hotel does provide recycling bins for paper, glass, metal and plastic in guestrooms, lobby and canteen where collaborators dine. However, for better performance, I assume they should also provide recycling bins in back offices at least they could install only for paper and plastic the waste that prevails most, in public areas near to the coffee machines and to the water filling stations would be enough for plastic cups. In the two kitchens of the hotel, there would be needed recycling bins for plastic, aluminum, glass and organic.

Moreover, they should mark the storage bins with clear signs to make recycling process easier for employees and collaborates.

Another method to improve waste management would be to prevent its production through some set of actions, as reusing paper whenever possible; printing on both sides; hotel directory, phone books, and newspapers could be available only online. So, to reduce the waste would mean not to create it in the first place. The hotel should also review its purchasing policy because it pays twice for the waste it produces – firstly in the form of packaging and secondly to dispose of it.

By reducing the amount of solid waste and increasing the recycling rate, the hotel will receive money for each ton of recycled materials. In this way the hotel could allocate the collected money through recycling to a special staff fund from which could be organized events for all collaborators, this would serve as an impulse for them to maintain their involvement in this project.

Therefore, for the hotel to operate an effective waste management program, it requires a stable organization, staff training, and attention to details. As a result, this will help the hotel reduce the amount of waste produced, save money and protect the environment.

Another obstacle I remarked during the internship was the fact that the host entity perceives restrictions imposed on guests as something that will jeopardize their guest's enjoyment and overall satisfaction during their visit. I comprehended that, after a conversation with the director of human resources who related that they are not interested in installing fixed containers for shampoo or soap in guestrooms because this will jeopardize the hotel's image towards its clients. Except, it is quite the opposite because guests worldwide are increasingly environmentally concerned and are demanding sustainable standards in the hotels they stay during their vacation. Several years ago, Markower and Pike noted that surveys consistently find consumers to be “concerned” about their environmental impact and are willing to pay more for green operations.

The hotel needs to improve its environmental standards and best practices, like in the case of towel reuse program, for this campaign to work effectively there are several key elements that must be improved. First, they should perform a report about the rate of guests that participate in this program and then to find new strategies to increase the number of involved guests. As for example, one of the strategies would be to add one more option to those three awards that the guests receive when joining the program (5€ credit voucher in hotel's restaurant, 500 SPG points or 5€ donation to UNICEF) the forth option could be a reusable bottle water. I believe this would be a good reward as well as appealing to guests because it is useful and also because guests have little motivation to save money for hoteliers. The bottles could be labeled with the hotel's logo and a short message about the environment protection. As a result, these bottles would not only be useful to the guests, it would also work as a tool for the hotel's promotion plus the environment would also benefit from this because it will help to reduce the number of single-use plastic bottles. Another strategy that could get guests involved would be to inform them about the precious value of water and the need to conserve it through note cards visibly placed in guestrooms. Moreover, hotel towel and sheet reuse programs require a cooperative effort from both the guests and the hotel staff.

As the Sheraton Lisboa Hotel & Spa was not born as a green project, still they managed to turn their daily operations into more environmentally ones. The hotel had undertaken plenty of environmental measures as water and energy reduction, yet I assume it can also have a great impact out of additional measures such as reducing the number of purchased products by ordering refillable items. As for example, the hotel could perform an evaluation of all its products, see which are the ones that could be refillable or reused,

then register all the products before transferring to refillable ones this will help to examine the difference. For instance, buying a coffee machine in each department with reusable cups as I suggested in the human resources department, and as a result, they were able to reduce the use of approximately 320 plastic cups during my internship which lasted three months. Moreover, they still use reusable mugs as a consequence they continue to reduce the use of plastic cups and it could have a much greater impact if all the departments would do the same. This could also work with the refillable pens or pencils, as I noticed they use a large amount of them in back offices and meeting rooms. First, it can appear to be insignificant practices but taking all together it can lower the impact on the environment plus it can even reduce the operating costs with relatively short investment payback periods.

I remarked that the hotel has the interest to participate in environmental and social movements, they simply need someone who is well informed about projects with social concept, to guide them in the right direction and getting them involved systematically in activities with sustainable development for local schools or communities, charity events, etc. First, it is remarkably significant that the hotel has the intention to cooperate, another asset value would be the number of collaborators which is more than 200 people, this increases the probabilities of the hotel to get involved.

One example of this sort of campaign could be the collection of used soap left by guests. I assume this would be a tremendous opportunity for the hotel to prove their commitment to the environment and society. Considering that people from the impoverished country all over the world die due to the lack of simple hygiene, while, in the hospitality industry, millions of guests leave behind partially used soap and shampoo products which besides all generate a large amount of waste.

Furthermore, as Sheraton Lisboa Hotel & Spa is a large hotel and makes part of the international hotel chain "Marriott" they could join their forces with all the hotels from Portugal that belong to the same chain and conceive their own collection soap campaign. I am certain together they would have an enormous potential to change the hotelier's impact on society and the environment.

They could create a partnership with a soap factory where they will take the used soap to be recycled and distribute it around the world. The goal of this campaign is to prevent

deaths from acute respiratory infection and diarrheal disease, the top two killers of children under five years old in the developing world.

Another social campaign they could get involved would be to filter and bottle the tap water at the hotel selling it in restaurants and banquets. Afterward, the hotel could become a member of a non-governmental organization that provides safe water in developing countries. Furthermore, there are many NGOs that are always looking for partners to help them provide clean and safe water in impoverished countries, the best-known projects of this kind are Whole World Water, Water Aid, and Just a Drop, which encourages the tourism industry to filter, bottle and sell their own water supply allocating 10% of the proceeds to their fund.

During my internship, I wanted to develop a project of this kind, but I found out the hotel already had water bottle-filling stations and they returned the equipment to the supplier “PMS Coffee Solutions” reporting that the service is not profitable. I also assisted a conversation where the F&B manager explains to the director of human resources that they did not have time to fill the bottles especially when there were huge banquets. That got me thinking and realized that that was the real reason why the service was not profitable. I also got in touch with the ambassador of the Whole World Water NGO where he explained this process is 100% gainful and the hotel cannot decide to go for any other reasons but not because it is not profitable. He even sent examples of some hotels that implemented the service where was easy to analyze the performance of savings and revenues of those hotels.

I assume the hotel should invest more in technologies like solar power to reduce its energy use, because even if there was implemented other practices for energy efficiency the hotel still not diminished enough its consumption and continue to produce large quantities of carbon emissions. I comprehended that after the interview with the hotel’s engineering director as she claimed that there was a slight change in energy consumption since they installed LED light bulbs. Moreover, the hotel produces large amounts of carbon emissions, its annual footprint is approximately 1.500 tons of CO₂ as a result of 4.063257 kWh consumed in 2017 (Appendix 5), this data was obtained from the hotel’s energy consumption report, therefore, the only alternative to reduce it would be the use of renewable energy.

The Sheraton Lisboa Hotel & Spa had undertaken a lot of environmental initiatives some of them analyzed above, yet there is a lot of work to do in this sense. Still, I believe the hotel will continue to improve its environmental management, at least due to the Marriott International support and conditions imposed, considering that the chain now wants to change the way of managing its business into a more sustainable one through all its brands.

During the internship at the Sheraton Lisboa Hotel & Spa, I noticed that the hotel is not ready to be totally environmentally friendly and prefer to implement measures that do not arrange difficulties. They would rather introduce measures to reduce its energy or water consumption at a low-cost with minimum intervention for their ongoing process. Moreover, it is that type of hotel that can afford to implement expensive and efficient measures, and the most significant part is that the hotel will earn those investments back no matter what the period. Consequently, I believe the hotel pays more attention to profit levels than to social or environmental performance, but what they do not understand is that being green it would eventually reduce costs and bring economic benefits on a long run. The studies reveal great economic benefits from the environmental management and also improvements in company's image towards its clients (Bonilla-Priego et al., 2011).

Being an environmentally responsible hotel requires the adoption of a new corporate culture among its employees, stakeholders and guests. To strengthen this commitment, changes should be implemented progressively within the hotel, which would imply organizational change, behavior change as well as technological change (Zein et al., 2008).

After the analyzes of the hotel's environmental policy, it was clear that the hotel has a long way to go to be truly committed to the environment, which would normally imply more inspiration, training, communication and dedication. According to Jabbour et al. (2010) human resource and organizational management practices are essential to environmental management in the hotel industry.

4.3. Proposed Projects

First of all, I believe that if the hotel wants to achieve relevant and realistic targets regarding environmental management it will be necessary to invest time and financial resources in a careful planning, a good organization, and training.

I. To create a green council

For a better performance concerning environmental management, I believe the Sheraton Lisboa Hotel & Spa need to create a department designated only for sustainability with good professionals properly qualified to implement environmental best practices in accordance with regional and international standards.

The department should have in charge an environmental manager who will develop environmental initiatives in cooperation with his “green team”. Therefore, the “green team” could be composed by the environmental manager who would designate one person from each department to complete the team. They will help him to monitor weekly or monthly the results of the hotel's environmental undertakings and ongoing efforts within each section. So, their task would be to inform all the staff about their work, as well as supervising the execution of the established environmental practices. Like for example, to verify if the washing machines are running only full or to oversee if the collaborators are properly separating the waste. By monitoring the situation closely, they will manage to find what are their gaps and then looking for solutions or improvements.

All the ‘green team’ members should be listed on the notice board, so the staff could know who their environmental representatives are. Moreover, the members of ‘green teams’ would rather wear special badges by which they can be identified.

II. To increase environmental awareness through collaborators and guests

I strongly believe the hotel should focus more on sensitizing its collaborators and guests about the environmental and social issues.

The first step for the hotel, to begin with, is to change their behavior towards the environment and then it will be simpler to pass this environmental culture to their guests and staff. So, if the hotel will prove to its guests and collaborators that they have installed technologies to reduce the consumption of energy and water in order to conserve the natural resources this could drive their interest in getting involved contributing to the protection of the environment.

The hotel needs to develop a series of communication materials that can be used to sensitize their guests and staff on water and energy efficiency, as well as on reducing waste and recycling it. Unlike more profound changes which require big investments these materials come at zero cost, but with substantial results. Raising awareness of the staff and guests about the ecological issues can be performed through posters, newsletters, or suggestion box.

Currently, organizations are increasingly required to reduce their environmental impact through the adoption of environmental management practices. Although, environmental management in hotels will become effective only when adequate support for human resources will be put into practice (Daily and Huang, 2001).

Staff:

To inform and involve staff in the hotel's environmental projects

The environmental manager needs to guarantee the information flow about the environmental initiatives to the staff because their knowledge and involvement will provide guests with appropriate information about the hotel's practices (HES, 2011). It is essential to use internal communication among people at various levels and functions inside the company (ABNT NBR 15401, 2006).

The staff will be happy to support the hotel's efforts regarding the environmental protection and their direct participation will lead to increased satisfaction in the workplace (HES, 2011).

“Employees should be invited and encouraged to respect the environmental measures that have been implemented (Zein et al., 2008, p.48).”

Keeping the staff updated about existing and new environmental initiatives will give them a better understanding of their role, as well as their contribution. By providing the employees with information about the hotel's environmental projects, this enables them to familiarize guests about it.

To organize periodic meetings with the staff regarding environmental sustainability

Since continuous meetings regarding environmental sustainability represent a significant part in hotel's environmental management, there should be a “green council” who need to hold periodic meetings with all the collaborators to brief on all the progress achieved lately and on issues concerning environmental initiatives. At the end of the meetings, it

is essential for asking collaborators for their feedback, as well as asking their suggestions about the improvements could be made to reduce environmental impacts. Even if this involves simple changes in practice such as ensuring lights are switched off in meeting rooms when they are unoccupied or not cleaning basins with the tap running, they can definitely have great results in energy or water efficiency. The “green team” should make sure the reductions are monitored and reported back to future meetings if the results are positive the staff should be congratulated for the environmental achievements which the hotel performed due to their involvement and for that they could get a special lunch as an encouragement to continue.

It is important for the hotel to understand that sustainability works better when the whole team thinks green and brings durable solutions to their job.

The “green council” should organize at least one to three annual meetings to ensure the continual development regarding the environmental management.

To organize environmental trainings for hotel staff

Unnikrishnan and Hegde (2007) conducted 16 case studies concerning environmental training in companies in India. Moreover, that paper was the only one fully focused on environmental training that involve a qualitative research approach. The authors determined that half of the companies analyzed were concerned about environmental training. They also concluded that environmental training requires the support of top management.

That is why the environmental manager should perform ongoing training about the environment and its preservation, especially due to high employee turnover in housekeeping department this will ensure that everyone is aware of the hotel's environmental policy it will guarantee the participation of all the collaborator as much as possible. The environmental courses for the staff should cover global environmental issues, solutions to contribute to the protection of the environment, as well as the benefits of being a sustainable hotel. At the end of training, the hotel could reward its collaborators with participation certificates.

Employee training is considered a key factor in creating environmental awareness and in the initial process for implementation of environmental strategies (Unnikrishnan and Hedge, 2007).

The environmental manager should also participate in different environmental training that could be in the form of training courses by consultants or experts, as well as participation in seminars, webinars, and other online courses. As the Sheraton Lisboa Hotel & Spa is a member of the Marriott international chain, they even have access to environmental courses online on the hotel's chain platform.

Guests:

To inform and encourage guests to participate in its environmental initiatives

Guest satisfaction with hotels' sustainability programs is seen as essential for their success. An early study determined that hotels might not have found an effective way to alert guests to their green operations. In that 2003 study, Jameson and Brownell noted that there are many hospitality companies that spend substantial time and money on the implementation of environmental initiatives, but were not getting the support, recognition, and respect they deserved for their efforts. Based on their study of 90 hospitality organizations, those researchers developed a CHR tool that provides practical guidelines to help hotels develop effective communication strategies to explain their environmental initiatives to its guests.

For the efficiency of projects in sustainability, it is essential for the hotel to involve his guests actively.

The hotel should inform its guests about its environmental efforts, as well as encouraging them to get involved in its environmental initiatives. And the best way to inform and sensitize its guests would be through brochures regarding environmental sustainability which can be available in public areas visibly placed, at the front desk, in guest rooms or published on all official sites of the hotel. This booklet can briefly describe the hotel's environmental initiatives, as well as providing its guests some tips to save water and energy, along with visual representations of each tip, to make it attractive and easily copied by the audience. To inform the public from the outside of the enterprise about its actions related sustainability (ABNT NBR 15401, 2006).

Or else through a short educative video where are explained the benefits of water and energy savings for travelers. It can also cover some tips about how they can contribute to the protection of the environment. For example: using a bath instead of a shower, turning off the tap while brushing the teeth or switching off the room lights when these are not being used. The video should be visually appealing for all ages, and easy for the guests

to follow the tips, both in the hotel and at home. It can be displayed on TV monitors in guest rooms, public areas or conference areas (HES, 2011).

To send a booklet about sustainability along with the confirmation of the hotel stay

Another way to contribute to the guest's awareness regarding environmental and social sustainability would be to send them a leaflet along with their confirmation stay. I consider that in this way the hotel will not only contribute to their client's awareness but also will show them that they are really committed to protecting the environment.

The leaflet will include information on how to be a responsible tourist in order to reduce the impact on the environment and society when traveling. As for example, they could use the booklet "Tips for a responsible traveler" developed by UNWTO, Global Code of Ethics for Tourism and 2017 International Year of Sustainable Tourism for Development, because I consider it to be a credible source as long the references are trustful and internationally recognized. It contains tips about how to honor the host and the heritage, how to protect the planet, how to support the local economy as well as how to be an informed and respectful tourist.

By sending the leaflet along with the guest's confirmation stay, the hotel will expand its perimeter of influencing people about the protection of the planet. I assume as a sustainable hotel it is in its power to inform its guests as well as advising them to be responsible tourists.

To make an environment report about the evolution of the hotel regarding sustainability and then make it public

The idea of making an environment report on the evolution of the hotel's sustainable development is to communicate its guests' certain choices regarding the environment and the undertaken significant measures with a tangible impact on the environment.

In that report the hotel can reflect on its commitment to the environment and outline its recent performance.

Others could see this as greenwashing, but on the contrary, I consider it is essential the hotel explains to its clients why it has implemented certain environmental initiatives. In fact, this is not to boast but to educate guests and increase pressure on competition to follow suit. Sustainable marketing is a 'must-do' as every small step taken is an important mile in the long run.

If the hotel would share its environmental achievements this will encourage its guests to understand its perspective and get rid of any skepticism.

To actively increase awareness through social media

I believe the hotel should be more focused on increasing environmental awareness through social media because it is a powerful tool to rely on.

It could share on its all social pages as Instagram, LinkedIn or Facebook, infographics to help generate awareness for the issues surrounding over excessive production and plastic pollution, (Appendix 6; Appendix 7; Appendix 8). The hotel could post messages like: “We are working on turning our client’s footprints into green ones, so our clients could enjoy their vacation with a clean conscience” or “To fight environmental issues, we need to contribute as much as we can in making things better by taking small green steps every day.”

The hotel could also post on social media each week short videos about environmental issues that we are facing nowadays it could also contain specific information about how we can contribute to the preservation of the environment.

To increase environmental awareness through creative ideas

The hotel could install chalkboards with information regarding environmental issues to increase the sustainability awareness of the guests and staff.

The hotel could write every week on chalkboard messages about environmental issues and then come with solutions (Appendix 9), as for example:

- Statistics shows that more than 1 million plastic bags are used every minute worldwide.

Solution: Bring your own bags shopping and avoid plastic bags. Get into the habit of saying “no thank you, I do not need a bag”.

- Over 200 billion bottles of water are consumed each year and over 176 billion empty bottles ultimately end up in landfill or worse in ocean. Moreover, each year, 1 million seabirds and 100.000 marine animals die from ingesting plastic.

Solution: Stop buying bottled water, opt for reusable ones.

- Over 5000 disposable coffee cups are thrown away every minute, that's 2.5 billion a year.

Solution: Do not buy coffee cups, bring your own travel coffee mug.

- Diesel powered is one of the worst polluters. Bad air quality develops health issues as severe respiratory stress, headaches, dizziness to cardio-vascular diseases, stroke and the worst-case scenario lung cancer. According to the WHO report around 3 million deaths are linked to exposure to outdoor air pollution; WHO report, 2017.

Solution: Use public transport or opt for walking or biking on your way to work – “Ride green to live clean”.

- In 1950, the world's population of 2.5 billion produced 1.5 million tons of plastic; in 2016, a global population of more than 7 billion people produced over 320 million tons of plastic– this is alarmingly set to double by 2034!

Solution: Let's mind the plastic and try to exclude it from our life through bringing our own bags shopping, using a reusable water bottles instead of plastic ones.

This will make the guests think about the subject and hopefully change their habits.

The chalkboard could be designed by the hotel and then it could be installed in the hotel's lobby or on every floor near to the elevators, so the guests could read while waiting for it.

III. To organize events regarding environmental preservation

Another suggestion I had for the hotel was for them to organize once in trimester events and activities regarding environmental preservation which would involve the staff and their families. The environmental activities shall vary from trimester to trimesters such as tree-planting activities, restoration of local green areas or beach clean-ups. The hotel can also get involved in supporting local infrastructure challenges.

To make it more appealing there could be organized different type of competitions, as for example, when cleaning a beach or a park there can be created teams and, in the end, the team that will collect more garbage will get a prize. This will encourage involvement and enthusiasm for the program.

IV. Supporting worldwide movements regarding the environment

The hotel could encourage its collaborators to celebrate the representative days designated to the environment, such as the Earth Hour, Earth Day, Energy Saving Week, Nature Conservation Day, World Oceans Day, Waste Reduction Week, World Food Day, World Vegan Day, World Vegetarian Day and World Environment Day. To support these events the hotel could organize different activities, such as nature guided tours to the green areas, participating in tree-planting events or cleaning up the property's grounds and its surroundings.

Another way of supporting some of those movements would be to host fair trade shows inviting local suppliers to sell their sustainable products based on the area's nature, history, and culture.

The companies could come up with special schemes on Earth day, Water day, etc. would enhance the awareness level of the employees, guests and the surroundings communities. Training sessions by the staff for schools, institutions of the local areas would exhibit the endeavors of the company towards sustainability and would generate positive publicity. Exhibitions on sustainability programs can be jointly held with the local community organizations to make the movement widespread (Kular, 2014).

V. To give the guests the opportunity to rent bicycles

After a research on the internet, I realized that there are few hotels in Lisbon that provide bike rental for its guests. And now when the Lisbon is trying to become a greener city, building a lot of cycling paths through the city, it would be a huge opportunity for the hotels to provide this type of service to its guests contributing to the protection of the environment.

I definitely consider that Sheraton Lisboa Hotel & Spa should offer its guests the possibility of renting bicycles, as well as encouraging the use of sustainable transportation, which is cheap, healthy and environmentally friendly.

I also suggested the hotel to put a decorative bicycle at the entrance of the hotel with the purpose to encourage its guests to drive green.

The decorative bicycle can also have several indicators with messages alluding to sustainability, such as "Drive green"; "Eco-friendly hotel"; "Sustainable future" or "Be the change", (Appendix 10).

This promotes the concept of an environmentally friendly hotel and definitely stimulates the guests' interest in renting a bicycle for the Lisbon tours.

VI. To encourage staff to use environmentally friendly means of transportation

The hotel staff should be encouraged to use environmentally friendly means of transport on their way to work, in order to reduce air pollution and improve health.

The establishment can encourage the use of environmentally friendly transportation in verbal or written communication. The establishment can provide good facilities to those who will opt for sustainable transport, like safe bicycle parking or charging stations for electric cars. Moreover, it can offer financial incentives such as tickets for public transportation or free parking for electric cars.

VII. To establish a water management plan

I think the hotel needs to have a water management plan which would start with measuring the water consumption per department. This will help them to determine the areas of the hotel with the highest consumption and as a result, it will help them to identify the area where they should reduce water consumption. "The EEA (European Environment Agency) has identified metering as a powerful tool for decreasing demand for water, with reductions of 10-25% achievable. Metering can also be a useful tool in identifying water losses (Fáilte Ireland, 2006, p.26)."

Therefore, despite their effort in installing water saving devices in the toilets, showers, and taps they could also implement new measures which could continue reducing their water consumption and here we can take into consideration the use of rainwater or grey water.

To collect the rainwater and use it for toilets or other suitable purposes

Using the rainwater would hotel to reduce its environmental footprint through water savings and even cut costs. Collecting the rainwater on the building site is one of the fastest growing strategies in the water conservation industry.

The rainwater could be collected and treated by simply installing a filtration system and therefore it can be used for toilet flushing or other suitable purposes, such as cleaning the hotel's area or laundry. Of course, the collection of rainwater needs to be done safely with

no adverse effects on the guests and staff of the establishment, the local population, and the environment.

Or to reuse the wastewater after the treatment

This will also lower the environmental footprint and reduce water consumption. Wastewater can be treated by a public wastewater treatment plant or by the establishment's own facility. Wastewater treatment agency provides reclaimed water as wastewater treated to drinking water standards, although it is deemed non-potable.

In all applications, the reclaimed water shall be strictly separated from potable water sources and end-uses. Because of the separate pipe-work involved, grey water systems are expensive to install, and chemical treatment of the recycled water is sometimes necessary for health and safety reasons. The payback can be anything from two to fifteen years depending on the cost of water and on the type of systems installed.

The treated wastewater can be used as well to supply water to toilets, urinals, laundry or it can be used to wash the floor.

VIII. To implement renewable energy at the hotel

Our carbon footprint is a measure of the impact that our activities have on the environment, particularly on climate change. It is related to the greenhouse gases produced in our quotidian lives through burning fossil for electricity, heating, transportation, and others.

“We are all aware that global warming is a major concern. Climate change is already having a significant impact on tourist destinations while energy consumption within hospitality industry contributes to global warming (HES, 2011, p.15).” The UNWTO (2011) has been working for many years to raise awareness regarding climate change issues in the tourism sector. The European Commission issued a report in 2011 warning that tourism receipts in Europe may decrease by five billion euros per year by 2080 due to the consequences of global warming. Tourism activities generate 5% of the total greenhouse gas emissions, out of which hotels and other types of accommodation account for 1%.

“It is now internationally recognized that the world must dramatically reduce greenhouse gas emissions by decreasing its use of fossil fuels. Renewable energy sources like wind, solar and hydropower are unlimited, as they capture energy flows available from the

natural environment. Use of renewable energy sources will help secure our future energy supply and lower the negative human impact on the environment. Currently, renewable energy accounts for 8% of the total energy used in the European Union, and targets have been set for this to increase to 20% by 2020 (HES, 2011, p.16).”

According to Cornell Hospitality Report (2015), recent advances in technology related to renewable sources of energy can improve the hotels’ finance by simply implementing these alternative energies.

The hotel sector is an energy-intensive one which requires the burning of huge amounts of fossil fuels. As the Sheraton Lisboa Hotel & Spa is a big hotel it consumes a lot of natural resources which causes damage to the environment, and in order to reduce it, the hotel could source its own energy from solar power or purchase eco-certified energy.

Moreover, as Portugal is a sunny country I consider this is a huge opportunity for the Sheraton Lisboa Hotel & Spa to use energy from renewable sources such as solar panel because they could benefit from it almost all the year around and when there is no sun, the hotel could purchase eco-certified energy.

If the hotel would install solar technology it will start saving on energy bills immediately, depending on the system and the prices charged by the local energy provider, it can be expected to offset the start-up costs within four to twelve years. Most systems have a 25-year manufacturers’ guarantee and a working life of over 40 years.

For a bigger impact, the hotel could incorporate solar water-heating and solar photovoltaics, which will help it to cut CO² emissions, to reduce operational costs as well as increase competitiveness and sustainability.

As the hospitality and tourism industry is expanding rapidly and the fact that it consumes large amount of energy it becomes imperative for the hotel owners to adopt measures that would lead to a sustainable future for us and the coming generation (Kular, 2014).

IX. To restructure the actual recycling system

The Sheraton Lisboa Hotel & Spa has already implemented waste management which happens to be inefficient (Appendix 11) that needs a total restructuration for better performance.

And to begin, first, the hotel needs to ensure that the sorting facilities are easily accessible to the staff.

I suggested them to start with the canteen section where they need a new container with separate bins for different types of waste with clear signs on top of each one, (Appendix 12).

As well as, all the departments of the establishments should be equipped with recycling bins, to facilitate the waste separation for its employees and guests, (Appendix 13).

To lower the environmental footprint through reducing the energy consumption, use of resources and the creation of waste in relation to paper production, the hotel should take initiatives to reduce the use of paper in offices and meeting rooms. Some initiatives I had suggested was to reduce the use of paper available in the meeting rooms, to provide paper only upon request, to offer accessibility to tablets for writing notes, to print on both sides as much as possible and to reuse the paper for notes.

Then the next step for this to result would be to provide adequate equipment to the housekeeping team, which will help them to collect easier the waste for recycling. Housekeeping trolleys need to be divided in different compartments and each one should have colored trash bags which will facilitate the process of waste sorting.

The hotel could also use a compactor to crush glass into small pieces which will save space and reduce the number of vehicle collections.

It also produces huge amounts of unnecessary waste because the restaurants, canteens, and bars offer to guests and staff single dose packages for milk, sugar, butter, honey, jam, yogurt, cheeses, etc. and worse they are not recycled. In this case, I suggested them to provide all those products in large bowls from which everyone eats, that is because the most effective way to reduce plastic waste is to not create it in the first place.

Not to mention, that there is so much plastic out there that formed a plastic island in the middle of the Pacific. That island is called the Great Pacific Garbage Patch or the “8th Continent” which it is 17 times the size of Portugal (National Geography,2018).

The information for guests about waste sorting possibilities can be presented in the booklet with the environmental initiatives of the hotel, available at the front desk or on TV-monitors in guest rooms, as well as in public areas.

And the last step to achieve results would be the ongoing training of its employees on waste management.

X. To recycle the organic waste

Another suggestion I had for the hotel was for them to recycle its organic waste and send it to “TRIU” composting central. In fact, it was a project I tried to develop during my internship but unfortunately the attempt was unsuccessful. Because when I talked to the technical engineer from the recycling company “TRIU” who is responsible for the Sheraton’s waste management, she told me that this process is too demanding to be introduced, as it needs to be constantly monitored. She even told me that the hotel already tried to implement this a year ago, but it was unsuccessful, because no one took that seriously and there was no one to attend the process. Moreover, besides the required equipment the hotel must provide its employee's ongoing training if they want to make this work.

Furthermore, this time the technical engineer from “TRIU” wanted an assurance that the process will not be leftover once again and as I was there only for my internship she did not want to take the risk and get involved.

Actually, I consider it a huge loss for the hotel because by composting its organic waste it would lower its environmental footprint and thereby cut costs.

XI. To create handicraft objects from waste items

I recommended it to the hotel to collect and sort everyday waste items such as glass bottles, empty toilet paper rolls, wine corks so that it could be reused or recycled.

Then all those items could be transformed into different objects like for example, from wine cork it could be created pinboards for back offices (Appendix 14) among other decorative products (Appendix 15), from glass bottles could be designed decorative vases (Appendix 16) or the empty toilet paper rolls could be turned into wall art (Appendix 17).

Furthermore, those handicraft items could serve as decorations in different sections of the hotel, for example, the decorative vases from glass bottles can serve as decor for the restaurant’s tables, (Appendix 18). Or there could be designed an “environmental corner” where would be presented all those crafted objects.

Those recycled craft products could also serve as Christmas (Appendix 19), and other festival decorations, distributed both in the hotel lobby and in the administrative areas.

Some of those objects could be donated to orphanages which could serve as decoration and inspiration for the kids. When offering those handicraft items, the hotel could also make a short presentation for children explaining the reason of those recycled objects and the importance of protecting the environment.

As the hotel generates huge amounts of waste, this concept would help to reduce it through creative ideas. Recycling and displaying those crafted objects will not only attract its guest's admiration it will also help to increase awareness concerning environmental issues.

XII. Indoor Environmental Quality

According to the US Environmental Protection Agency, indoor air is often more seriously polluted than outdoor air. Given that many of us spend up to 90 per cent of our time indoors or in vehicles this is significant. For general health, well-being and safety reasons, human beings require a comfortable indoor temperature with air free from dust, irritants, pathogens, unpleasant odors, mildew and other contaminants. Many factors affect indoor air quality (IAQ) in hotels including:

- levels of outdoor pollution, caused for example by smog, traffic or aircraft emissions and pesticides
- sources of indoor pollution including the materials used in the fabric of buildings, carpets and soft furnishings, smoking, cleaning chemicals and the use of perfumes and salon products
- the rate of exchange between indoor and outdoor air, i.e. ventilation rates and distribution
- the amount of moisture in the indoor environment, which is considerably increased in hot humid climates, near kitchen areas and if the hotel has a gym, spa or indoor swimming pool. In serious cases this can lead to the growth of mildew which has health implications (Green hotelier, 2007)

IAQ is of great importance in the hotel environment for the following reasons:

Guest satisfaction – guests will not complain about a room that exacerbates any allergies they may have, but this could be a reason for not returning back or recommending the hotel to others.

Staff productivity – staff cannot work efficiently and effectively if they are in an uncomfortable place with poor air quality. This will definitely affect their concentration, productivity and even their interaction with hotel's guests. Poor air quality can cause headaches, tiredness, dry or sore eyes or throat, skin irritation, dizziness and even nausea. So-called 'sick building syndrome' can have a harmful effect on long-term health. To fight indoor air pollution the hotel can focus their attention on the four key elements of ventilation, filtration, pressurization and maintenance of HVAC systems. So, besides the investment in modern, efficient air-conditioning equipment and proper maintenance, the hotel should also take in consideration the use of specific flowers which will improve the indoor air quality, using furniture made from sustainably-sourced wood that do not contain formaldehyde and textiles used are wool or cotton, using sprays that do not contain propellant gases and avoidance of carpets with chemicals that may irritate skin and eyes (Zein et al., 2008).

4.4. Developed actions

During my internship I tried to analyze closely the hotel's environmental management and find which are the new green initiatives that can be implemented and increase the hotel's environmental performance.

The developed actions that were developed during the internship are analyzed below:

Achievement of Green Key Award

First thing I accomplished when I started my internship at the Sheraton Lisboa Hotel & Spa was the achievement of the Green Key Award.

Green Key is a voluntary eco-label for the hospitality industry as well as attractions and restaurants, which is endorsed by the World Tourism Organization and recognized by Global Sustainable Tourism Council. The award is valid for one year at a time. (Green Key, 2018)

The process of obtaining the Green Key was suspended because the person responsible for it from the department of human resources happened to be fired and so there was nobody to take care of the process. There were only two weeks left to submit the application, so first I got in touch with the organization explaining the situation and asked them if it is possible to extend the term with one more week. Fortunately, they approved and further on I started to analyze all the documents related to the process. As the Green Key award is based on compliance with strict criteria in the areas of environmental management (water, energy, waste, cleaning, etc.) and sustainability education (staff, guests, suppliers, etc.) that involved a careful examination from my part. As a result, I analyzed the criteria and gathered all the required documents for the submitting the request. The Green Key criteria is set by the Foundation for Environmental Education, which represent the social and environmental commitment of the hotel.

To gather the necessary information and documents I had to talk to the managers of almost every department. As for example to fulfill the checklist of sustainable indicators regarding energy and water efficiency I had to discuss with the hotel's engineering manager. The requested documents concerning environmental purchasing policy I collected from the manager of the purchasing department furthermore, the rest of the required reports about the hotels' environmental management I obtained from the director of human resources.

After the application for obtaining the Green Key award, there took place an on-site audit to confirm the implementation of environmental practices and verify the documentation concerning the environmental policy of the hotel. After one week from the Green Key audit, the hotel had been approved to receive the award. The award (Appendix 20) was handed at a ceremony that took place at the Lisbon Marriott Hotel.

The measures undertaken by hoteliers in terms of the environmental protection can lead to a reflection of being eco-labeled. The most known labels for accommodation are the “ISO 14001”, “European Eco-Label” and the “Green Key”. Getting accreditation requires the implementation of mandatory and optional criteria. Eco-certifications help organizations to improve their environmental performance gaining an important competitive advantage that can be used as a marketing instrument (Zein et al., 2008).

I also defend that a Green Key Award helps to make a difference on an environmental level in the hospitality industry and also gives its guests a vote of confidence regarding the environmental protection by opting to stay with the Green Key establishment.

- ***Displaying sustainable washing solutions in the laundry department***

I elaborated a table with instructions about how to use the laundry machines in the most environmentally friendly way to save energy and water, hence placed it near the laundry machines. Through this, the hotel will lower its environmental footprint through water savings and thereby cut costs.

The instructions were displayed in an easily understandable way in Portuguese along with pictures to attract collaborator’s attention and sensitize them (Appendix 21). The sustainable laundry solutions are displayed below.

Water efficiency (*Eficiência da gestão da água*)

1. Sort the laundry according to the degree of soiling, so that only the dirtiest items are washed intensively (*Separar a roupa de acordo com o grau de sujidade, de modo que apenas os itens mais sujos são lavados intensamente*)
2. Use the washing machines in “full load” mode in order to limit the number of wash cycles (*Use as máquinas de lavar no modo “carga total” para limitar o número de ciclos de lavagem*)
3. Eliminate the prewash this will allow a 25% reduction in water consumption and use water-saving wash cycles (*Elimine a pré-lavagem isso vai permitir uma*

redução de 25% no consumo de água e utilize ciclos de lavagem que poupam água)

4. Wash towels and linen at the request of guests rather than every day (*Lavar toalhas e lençóis a pedido dos hóspedes, em vez de todos os dias*)
5. Reduce water pollution by using fewer polluting detergents (*Reduzir a poluição da água usando detergentes menos poluentes*)

Energy efficiency (*Eficiência da gestão de energia*)

1. Fill washing machines to their maximum capacity (*Preencha as máquinas de lavar até a capacidade máxima*)
2. Use low temperature washing programs (*Use programas de lavagem de baixa temperatura*)
3. Plan your washing so that the dryers are continuously in use, thereby preventing heat loss (*Planeje sua lavagem para que os secadores estejam continuamente em uso, evitando assim a perda de calor*)

• ***The presentation regarding the importance of recycling***

During my internship, I identified some significant gaps in the hotel's environmental management, such as poor waste management, and weak environmental communication to its staff. Therefore, I presumed the solution to this problem would be to increase environmental awareness through collaborators which consequently will contribute to the increase of recycling rate. Moreover, I decided that the most reliable method to raise awareness would be through a presentation about the importance of recycling (Appendix 22). I consider staff preparation is indispensable when an establishment wants to implement an environmental initiative because through training the hotel manages to sensitize its employees and therefore convince them to get involved in the ongoing projects. To implement solid waste management in a hotel it is a challenging process, as the procedures are interconnected with each other. Because if guests and collaborators would separate the waste but the housekeeping crew would not be trained to collect it correctly then this initiative is unlikely to succeed.

As a consequence, I settled the dates for presentation with human resources director and the performance was held during for days, as the hotel has 200 of employees it was necessary to divide them into groups with a manageable number of people. Moreover, I

ensured the content of the presentation was easy to understand and that it matched to all intellectual level.

The sequence of the presentation per days:

1st day – designed for the department of human resources (the director of the human resources department advised me to begin with a smaller audience and to gain confidence for the next presentation)

2nd day – for the housekeeping department

3rd day – as the rest of collaborators from all the departments were separated into two groups, therefore, the third day was designed for the first group of collaborators

4th day – in the first part of the day the presentation was performed for the second group of collaborators and in the afternoon for the HOD.

The general objective of the presentation was to inform the impact that humanity has on the environment, that we destroy our planet through the choices we make every day without thinking of the consequences.

Therefore, the principal objective of the presentation was to sensitize as many people as possible about the environmental issues with the intent to make them change their habits for the sake of their descendants. Of course, I could not expect to change the hotel's waste management through one presentation because this is a complicated process which involves more dedication and a closer approach.

So, in this presentation, I approached the climate change, ice melting, the increase of sea level and the extinction of animal's species, where the excessive consumption and consequently large volume of waste are some of the reasons that cause the enumerated problems. As we became a consumer society we consume more than we need and generate a large quantity of waste, moreover, soon there will not be enough space for it. Even if there is a massive increase in recycling rates over recent years, consumer society continues to generate large quantities of waste.

As I learned that is extremely important the way of presenting the information I tried to make the session enjoyable and to quantify the importance of recycling in a way that staff could learn more and be motivated to get involved. Consequently, I presented the following arguments:

- Recycling one tin can save enough energy to power three hours of television;
- Recycling one tone of paper will save among 17 and 24 trees; and so on.

I also communicated what the repercussions if we do not take action to improve the condition of our planet and emphasized the positive impact on the environment from the application of environmentally friendly activities in our daily life as well as at our workplace. Green steps like garbage segregation or carrying reusable water bottle seems to be insignificant actions which actually can make a huge difference.

I believe the hotel should frequently organize environmental training to all its employees, at the end of sessions the participants could be asked to identify actions that the establishment can take to become more environmentally-friendly.

- ***Introduced the Meatless Monday program***

After the presentation about the importance of recycling the hotel approved the implementation of the Meatless Monday program. In the presentation I approached the issue regarding the depletion of natural resources, including water, as a consequence, I proceed with the evidence that the food industry consumes a large quantity of water. It requires 15,500 liters of water to produce 1 kg beef (SIWI, 2018) , this quantity of water come as an estimate of the volume of water the animal drink during its lifetime and the amount of water it is used to grow the crops that afterward serve as food for animals, considering that agriculture accounts for 70% of global water withdrawal (FAO, 2010). Besides, the fact that meat production is water-intense, I also explained the impact it has on our health and on the environment. Therefore, as a result, the director discussed with the Executive Chef the alternative dishes that could replace the meat plates and after they settled the menu for the Meatless Monday program which became effective on the 1st July 2018 (Appendix 23).

This initiative will help the hotel to reduce its environmental footprint by minimizing the amount of meat consumed and thereby cut costs.

- ***Replacement of disposable plastic coffee cups with reusable ones in the human resources department***

During my internship, I noticed that everyone from the human resources department took their coffee from disposable plastic cups. While I also have the habit to drink coffee it felt wrong to use those plastic cups only for five minutes knowing that they will end up in

landfills for more than hundreds of years. As the department already had a coffee machine I proposed them to use reusable coffee cups instead of disposable ones, explaining the impact that plastic has on our health and the environment. Moreover, the director of human resources even brought from home coffee cups for everyone with a different color so that we could distinguish ours. Through this initiative, we managed to reduce a large amount of disposable plastic and the impact could be even higher if all the departments would do the same. They could also personalize their cups, this way it would be easier for everyone to recognize their own.

The advantage of this practice is that it implies small investment with a short payback period, and most important lowers the environmental footprint by reducing the use of resources, decreasing the amount of waste generation, and by diminishing the air and water pollution.

- ***Green Agenda***

As I noted that environmental awareness was not included in the hotel's green policy I thought of developing a "Green Agenda" and publish it online every month, with the intention to promote hotel's internal/external environmental initiatives and its improvement in this direction of sustainability.

Therefore, during the internship, I managed to elaborate one edition of the Green Agenda (Appendix 24) which actually was the only one, because the hotel does not have someone to take care of its environmental management more thoughtfully.

In this particular edition of the Green Agenda, my intention was to outline some of the measures that showcase the hotel's commitment to sustainability, such as the receipt of Green Key Award; installation of the key-card master; the collection of bottle corks for recycling or bottle plastic caps; installation of LED light bulbs, and others.

I chose to elaborate a Green Agenda as a monthly edition because it is easier to inform both guests and staff about environmental issues followed by some best practices and it is also a great chance to communicate about the hotel's green initiatives.

I believe the hotel needs to undertake additional initiatives about environmental awareness and inform the clients about its projects because if guests would know more about the hotel's environmental commitment, they will manifest more enthusiasm to

support the hotel's efforts. As a result, this will help the establishment to achieve its customer's loyalty and improve its competitive position.

Before requesting the participation of its guests, the hotel needs to demonstrate its commitment to the protection of the environment and communicate its implemented environmental measures (Zein et al., 2008). According to Manaktola and Jauhari, (2007) a green hotel can be the foundation for a great marketing strategy and the first step in marketing is providing consumers with what they want or need. A growing consumer base exists for green hotels and marketing the green practices of a hotel can help to position it distinctly in the marketplace.

- ***Distribution of newsletter about environmental issues***

As I noticed that the hotel has a limited administration of environmental awareness both through guests and collaborators. Therefore, I decided to develop a newsletter that will communicate them about the environmental problems the planet is challenging. I believe people do not take initiatives because they do not know specific information about this subject, if they will learn something that will surprise them then eventually they will change their daily habits or at least take in consideration to change.

During my internship, I issued the developed newsletters by email to all the hotel's department, every Thursday (Appendix 25). Fortunately, they continue to do so, increasing environmental awareness through their collaborators with the information I gave them, which will still be enough to cover up for four more months.

In this way the staff perceives the hotel to be sincerely committed to environmental goals and they become more likely to support the hotel's initiatives.

- ***Donations to a charitable organization***

Through the period of the internship, besides the environmental initiatives I also tried to develop some social campaigns, consequently, I organized a collection of materials and supplies among the hotel staff with the intention to offer those goods to a charitable organization. Therefore, I encouraged collaborators to bring the things that they no longer need but can still be used and give them to those who need the most.

So, I created a box and installed it on in the -3rd floor the place where everyone starts their working day because there is the device where all collaborators should introduce their admission code. I also took care to put the box close to the elevators, so it could

attract everyone attention while waiting for it. On the cardboard box, I fixed an announcement that explained the collection of goods destined to be donated (Appendix 26). The poster was also displayed on the notice board where the hotel fixes announcements for the staff' curiosities (Appendix 27). All the collected goods were donated to the non-governmental organization “*Legião da Boa Vontade*” (Appendix 28).

I was impressed by the collaborators' participation and convinced myself once more that people are willing to get involved in both social and environmental movements if there is someone to lead them.

- ***Collection of plastic bottle caps for charity causes***

When I started the internship at the hotel, I noticed a box slightly visible in a corner with few plastic bottle caps in it and in that moment, I realized that the majority of employees did not comprehend the significance of that box or those bottle caps.

Therefore, I decided to recover the campaign and look for solutions to make it work. First, I created an attractive box with an illustrative sheet that claims the collection of bottle caps for charitable causes (Appendix 29).

Then I effectuated another poster with more detailed information and put it on the notice board to spread the announcement, where I communicated that the hotel had made a partnership with the non-profit organization “Lipor” which benefits the disabled, accepting donations of plastic water bottle caps. This organization sells the collected caps to recyclers and uses the proceeds to purchase wheelchairs or other medical equipment for disabled people that cannot afford it. Moreover, I also send that announcement by email to make sure it will reach all the departments (Appendix 30).

I have to confess I was genuinely impressed once again by the collaborators' receptivity as at the end of my internship, I weighed all the collected caps and it resulted in 9 kilograms only in two months (Appendix 31). That is why I consider essential the initiatives in environmental and social awareness. After all, people do better when they know better.

The aim of this campaign was also to raise awareness through collaborators and show them the power of helping people in need without spending any money.

- ***Collection of wine corks for recycling***

This was another campaign that I initiated through the internship, therefore, I created three boxes to collect wine corks where I attached an illustrative notification concerning the initiative (Appendix 32), two of them were for hotel's restaurants and the last one was put on the - 3rd floor where is the highest movement. Additionally, I sent a notification by email to all the hotel's department explaining the reason for this initiative (Appendix 33).

- ***Instructions regarding waste separation in the waste sorting area***

The last action I developed inside the hotel regarding environmental management was the rearrangement of the waste sorting area, as that space was renovated a long time ago, most of the signs that indicated the waste division were already destroyed.

So, I elaborated instructions for all the containers to indicate the correct waste separation (Appendix 34), where I used illustrations in a simple format to facilitate the sorting process for the staff. I decided to laminate the instructions because in this way they will last longer. Furthermore, I asked the advice of an assistant from the maintenance department on how to properly attach those indicators, so they can last longer. He suggested to do it with an incredibly strong glue and with a double-sided adhesive band and then helped me to stick them on the wall in the waste sorting area.

- ***Save the towel***

Marriott International organized a competition "Respect the Towel" which unfolded from April until May. Marriott invited all Housekeeping departments from European Core Brands to join the competition. The conditions of participating were to create a short video no longer than one minute or photo communicating the value that each hotel give to their linen reuse program. Then it needs to be posted on the Hotel Instagram Account and includes the hashtags #respectthetowel #rtt #serve 360, followed by the hotel's own hashtags regarding the campaign Respect the Towel. Winners were judged by the following criteria's: most likes, the preferred post of the Judges (CLS Rooms Ops & Sustainability Europe &GO), most compelling Hashtag #. Therefore, the awards for the 3rd position was 400 USD, for the 2nd was 600 USD and for the 1st place was 1000 USD. The purpose of that campaign was to create Sustainability Awareness across Marriott's

European Core Brands. Therefore, it was an excellent opportunity for Sheraton Lisboa Hotel &Spa to showcase their respect for the towel while participating in this competition.

As a consequence, I also get involved in that competition and together with the director of the Housekeeping department developed an idea of creating a short video where all the hotel maids danced with the towels in the hands around a poster with the following message, Save the Towels. Additionally, I proposed to create little bears made out the towels and placed them in a circle around the poster (Appendix 35).

CONCLUSION

Sustainability principles refer to the environmental, economic, and socio-cultural aspects of development, to guarantee a long term of business' sustainability it should be established a balance of these three dimensions (UNWTO, 2005).

Environmental Management is about finding new ways to go forward with development while ensuring that the planet's life support systems are protected and preserved (Zein et al., 2008).

The anthropogenic actions that are changing the climate are becoming evident and are already influencing decision-making in the tourism sector. Environmental degradation affects all of us, and we all must think about how reducing the burden we place on the environment (HES, 2011). Numerous scientists argue that we have entered a new geological era, the Anthropocene, where human activity is directly affecting the planet, hence, we are beyond the point of preventing it from happening, we can at least take measures to slow it down.

Creating enterprises at the cost of destroying others and environment is not sustainable (Bhushan and Jauhari, 2008). Moreover, in the prevailing circumstances sustainability is no longer a necessity but a critical factor which deserve serious attention by industry, government, and society (Jauhari, 2014). Humankind must understand that sustainability is no longer an option, but a necessity, therefore we need to be extremely aware of environmental protection and its conservation.

Everyone needs to start taking small green steps in everyday life because it is the surest recipe for a better greener world and if humanity wants to remain on Earth, then it is worth fighting for this cause.

Almost every year the tourism sector generates up to 1 billion tourists globally and this leaves a considerable carbon footprint on the environment, from transport emissions to large consumption of natural resources, namely by the hospitality industry. Consequently, the environment pays a heavy price for our travels. That is why we need to review our way of travel, convert to responsible travelers who take only memories, leaves nothing but footprints, not the carbon variety.

The global hospitality industry is a large consumer of natural resources. Therefore, it had installed sustainable practices to reduce their excessive consumption to cut costs and

because tourists became more interested in hotels that diminish their impact on the environment. Kullar (2014) claim that whether it is a large hotel chain or a small operator the green initiatives are about to be implemented sooner or later to differentiate the brand. Green initiatives enable hoteliers to achieve remarkable results in environmental sustainability, which can also serve as a profitable marketing tool for the hotels to improve their perception amongst its stakeholders and guests. Despite years of conservation efforts, hotel's energy and water use are still considerable, but on the other side, this also opens the way to further sustainability efforts, which will continue to the double benefit of saving money and protecting the environment.

To conclude this paper I want to emphasize that I achieved almost all the proposed objectives related to this research developed during the internship, as for example I managed to effectuate the evaluation of the sustainable indicators, the analysis of environmental measures undertaken by the hotel and identified the new initiatives that the hotel could perform, after which I elaborated a plan with all the suggested projects and even managed to complete some of them. The reason I could not manage to implement all the proposed projects were different whether the hotel had no interest because had other priorities either I did not have enough time to perform all of them as there were multiple and all of them implied not only time but help for a second person.

Throughout the developed research I managed to demonstrate to the hotelier's benefits from the implementation of the environmental measures such as costs saving and environmental protection. A sustainable hotel can also achieve its customer's loyalty and improve their competitive position.

For the development of this paper, I also was able to answer to the question established from the beginning of this investigation, as for example to find the intersection between the development of the hospitality industry and the environmental destruction where I explained it in the literature review of the proposed research. I also managed to clarify the question if hoteliers manage to contribute to the protection of the environment. Therefore, if hotels would implement environmental practices in their daily operations, they will reduce the impact of the accommodation sector on climate change, reduce costs and eventually increase competitiveness, contributing as well to the sustainability and competitiveness of the destination of hotel's location.

Another objective I managed to analyze the correlation between theory and practice concerning the suggested subject.

During the internship, I realized that Sheraton Lisboa Hotel & Spa added environmental issues in its missions but at a general scale, adopting only some internal sustainable practices that do not involve substantial investment or time. Yet I consider they have a high potential of becoming totally environmentally friendly hotel, they just need to take the case with more seriousness as implementing a sustainable policy across entire operation it is a process that requires great and meticulous planning, especially when it fits into an area where most employees are not aware of the trend.

But considering that the Sheraton Lisboa Hotel & Spa was not conceived with an environmental concept, but introduced it over time, I have to admit in this case, that the hotel still managed to achieve sustainability performance by implementing environmental initiatives, such as joining the “Refood” movement, installing water reducers, LED light bulbs and introducing a waste management. It was encouraging to see a hotel of this dimension, part of an international hotel chain seeking to diminish its impact on the environment. Except if the hotel wants to trigger eco-efficacy completely, then it needs to focus more on environmental awareness, staff training, engage all collaborators from purchasing to housekeeping department in its sustainability policy, give more preference to local products and materials, use solar panels and provide electric service cars, as well as focusing on supporting social charities.

The experience at the Sheraton Lisboa Hotel & Spa provided the opportunity to evolve as a person, as a future professional and to discover new qualities as working under pressure, inclination for problems solving and easy integration into new cultural environments. This internship is the foundation for my future professional life, moreover, I hope to increase my impact upon the development of sustainability in the hospitality industry by encouraging hoteliers to change their operation management into a more sustainable one.

This research is a contribution to strengthening the importance of sustainability hospitality industry. In addition, the reader will find helpful guidance in this study that can be adjusted to suit the hotel’s context and expectations in environmental management.

Study Limitations

During the internship process at the Sheraton Lisboa Hotel & Spa I faced the following limitations:

- For a better understanding of this research, I proposed to distribute a questionnaire to the hotel's guests, where I intended to investigate tourist perception about environmental issues as well as their opinion about hotel's sustainable policy, though I did not manage to develop that research because the hotel did not want to disturb its clients especially with questions that it is not affecting the hotel directly or instantly. This survey could help Sheraton Lisboa Hotel & Spa to explore more about the relationship between hotel's sustainability programs, guest participation, and customer satisfaction, it could identify the profile of its clients, as well as guests' attitudes towards the environmental protection. By tracking individual preferences, through a questionnaire the hotel could understand and serve its customers even better. The collected data could be used for values segmentation, like what guests prefer or what is their perception about the hotel's sustainability activities. By knowing customers opinions and preferences, the hotel could target different types of segments.
- Regularly, when achieving sustainability, the hotel needs to continue and improve its operation through constant monitoring of environmental practices, something that did not happen at the Sheraton Lisboa Hotel & Spa, because from what I was able to investigate they reached a specific level of sustainability and then stagnated. Therefore, the hotel had solid sustainable management when the purchasing manager of the establishment took care of the environmental policy implementation but due to the bureaucracies and adjacent efforts, the process remained unsupervised, leading to the forgetting of introduced measures such as waste management, environmental awareness and others. I assume another reason why the hotel has poor environmental management is due to the fact that it gives priority to other procedures and the lack of a qualified person who would supervise the implementation of sustainable initiatives.

Future Recommendations

At the end of any research always appear other studies to be investigated. For me, an internship at this level provided an incredible experience, strengthening the interest in the hospitality industry, namely in sustainability.

This research will help to raise awareness regarding the contribution of the development of sustainable tourism, mobilizing all stakeholders to work together in making tourism a catalyst for positive change.

The proposed research can be useful to hotel managers seeking to improve their organization's environmental performance. Based on this study, managers will be able to confirm the need to align human resource management practices to sustainable management objectives, with special emphasis on environmental training.

Hospitality industry should manifest a higher interest in making a contribution toward environmental protection to bridge the environmental gap they created.

For the continuation of this study, it would be interesting to have a future project whose central purpose would be the production of the hotel's own energy, therefore using only clean energy or using water entirely from its private supply like rainwater or desalinated water.

Another interesting research would be about international hotel chains combining their forces together helping small accommodation to implement sustainable practices in their daily operations this would definitely help the hospitality industry to reduce considerably their impact on the environment.

It is extremely important to remark that this study is not just an academic essay. Its elaboration was based on the proposal of a project to be implemented by the establishment in the attempt to improve its operations. It is hoped, that the developed actions during the internship will continue to be performed.

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APPENDICES

This section contains the documents that served as a basis for the case study, namely:

Appendix 1 – Survey (English version)

The present survey intends to have an approach about the tourists' perception regarding environmental issues related to hospitality industry in a master thesis in Tourism by the Estoril Higher Institute for Tourism and Hotel Studies. This survey is entirely voluntary, anonymous and requires between 5-7 minutes of your time. Thank you for your cooperation!

Group A.

Social, demographic and others aspects of the sample

A1. Gender:

- a) Female
- b) Male

A2. Nationality:

A3. Age:

- a) Less than 18
- b) 19-28
- c) 29-38
- d) 39-48
- e) 49-58
- f) 59-68
- g) 69 or more

A4. Professional Status:

- a) Employee
- b) Unemployed
- c) Retired
- d) Student

A5. What is your length of stay?

- a) 1 to 3 nights
- b) 4 to 5 nights
- c) more than 5 nights

Group B.**Guests' perception about environmental issues and sustainable accommodations**

B1. What is your degree of concern about the environmental problems that affect the Earth (water stress, depletion of natural resources, climate change, excessive waste generation, deforestation etc.)?

- a) Not worried
- b) Somewhat worried
- c) Worried
- d) Very worried
- e) Extremely worried

B2. What is your level of concern about environmental issues that affect the world?

Choose from 1 scale to 5, where 1 is not worry and 5 is extremely worried.

	Level of concern				
Environmental issues	1	2	3	4	5
Water pollution					
Air pollution					
Excessive waste generation					
Loss of biodiversity					
Deforestation					
Erosion					
Climate change					

B3. What is the importance level of the implementation of good sustainable practices in our quotidian life to reduce the negative impacts on the environment?

- a) Not important
- b) Somewhat important
- c) Important
- d) Very important
- e) Extremely important

B4. Do you perform any of the "5 R" of sustainability into your daily routines (Rethink, Refuse, Reduce, Reuse and Recycle)?

- a) Yes
- b) No

B5. Among the following aspects, which are the ones that weight most on your consciousness for not contributing enough to the environmental protection?

- a) Producing too much CO2
- b) Not recycling enough
- c) Consuming excessively
- d) Leaving the tap running while brushing the teeth
- e) Throwing the garbage on the ground
- f) Not planting trees
- g) Others _____

B6. Which are the means of transportation you use while visiting a destination?

- a. Bicycle
- b. Public transport
- c. Own car
- d. Rented car
- e. Taxi
- f. Others _____

B7. When traveling which are the hotels you use to accommodate?

- a) Sustainable hotels
- b) Standard hotels
- c) I have no preference

B8. According to your perception, do you consider sustainable hotels have the potential to reduce environmental degradation?

- a) Yes
- b) No

Group C.

Guest's perception on environmental practices at the Sheraton Lisbon Hotel & SPA

C1. Do you think Sheraton Lisboa Hotel meets the required criteria to be considered a sustainable hotel?

- a) Yes
- b) No

C2. Did you know that Sheraton Lisboa Hotel received Green Key Award?

- a) Yes
- b) No

C3. Did you know that the hotel reduced the amount of waste with 5% from 2015 and donated more than 6000 € to UNICEF in 2017?

- a) Yes
- b) No

C4. Do you consider the hotel needs to disclose more about the implemented environmental initiatives to its guests?

- a) Yes
- b) No

C5. Would you be interested in joining the hotel's the Campaign Make a Green Choice?

- a) Yes
- b) No

C6. If the Hotel Sheraton Lisboa would provide rental bicycle service, would you be interested in using it?

- a) Yes
- b) No

C7. According to your perception, how important are the following environmental practices implemented at the Sheraton Lisboa Hotel?

Choose from 1 scale to 5, where 1 is not important and 5 is extremely important.

Environmental practices implemented at the Sheraton Lisboa Hotel & Spa	1	2	3	4	5
Waste recycling management					
Employee involvement in volunteer programs					
The use of cleaning products with eco labels					
The installation of water reducers					
The installation of LED bulbs					

Appendix 2 – Survey (Portuguese version)

Questionário: Indústria hoteleira e os seus Impactos Ambientais

O presente estudo pretende aferir a percepção dos turistas face às problemáticas ambientais associadas à indústria hoteleira, no âmbito de trabalho final de mestrado em Turismo da Escola Superior de Hotelaria e Turismo do Estoril. Gostaríamos que respondesse ao questionário dado que as suas respostas e a sua opinião são muito importantes para o estudo. Todas as respostas serão tratadas de forma anónima e confidencial. O questionário demora 5-7 minutos a responder. Obrigada!

Grupo A.

Aspetos sociais e outras variáveis da amostra

A1. Género:

- c) Feminino
- d) Masculino

A2. Nacionalidade:

A3. Idade:

- a) Menos de 18
- b) 19-28
- c) 29-38
- d) 39-48
- e) 49-58
- f) 59-68
- g) Mais de 69

A4. Situação Profissional:

- a) Empregado
- b) Desempregado
- c) Reformado
- d) Estudante

A5. Qual o seu tempo de estadia?

- a) 1 a 3 noites
- b) 4 a 5 noites
- c) mais de 5 noites

Grupo B.

A percepção geral dos hóspedes sobre as problemáticas ambientais e os hotéis sustentáveis

B1. Qual é o seu grau de preocupação perante os problemas ambientais que afetam o planeta (stress hídrico, escasseamento de recursos naturais, alterações climáticas, produção excessiva de resíduos, desflorestação etc.)?

- a) Nada preocupado/a
- b) Pouco preocupado/a
- c) Preocupado/a
- d) Muito preocupado/a
- e) Extremamente preocupado/a

B2. Qual é o seu grau de preocupação que atribui as seguintes problemas ambientais que afeta o Planeta?

Escolhe de 1 escala a 5 em que 1 é nada preocupante e 5 é extremamente preocupante.

	Grau de preocupação				
Problemas ambientais	1	2	3	4	5
Poluição da água					
Poluição do ar					
Produção excessiva de resíduos					
Perda de biodiversidade					
Desflorestação					
Erosão					
Alterações climáticas					

B3. Qual é a importância da implementação de boas practicas ambientais no nosso dia a dia para diminuir os impactos negativos face ao meio ambiente?

- a) Nada importante
- b) Pouco importante
- c) Importante
- d) Muito importante
- e) Extremamente importante

B4. Tem implementado apenas um dos “5 R” da sustentabilidade na suas rotinas diárias (Repensar, Recusar, Reduzir, Reutilizar e Reciclar)?

- a) Sim
- b) Não

B5. Qual das opções seguintes tem mais peso na sua consciência de não contribuir suficientemente para salvaguarda do meio ambiente?

- a) Produzindo demasiado muito CO2
- b) Não reciclar suficiente
- c) Ser uma pessoa consumista
- d) Não fechar a torneira enquanto lavar os dentes
- e) Deitar lixo na rua
- f) Não plantar árvores
- g) Outros_____

B6. Quais são os meios de transporte utilizadas enquanto viajar?

- a) Bicicleta
- b) Transportes publicos
- c) Carro próprio
- d) Carro alugado
- e) Taxi
- f) Outros_____

B7. Enquanto viajar em que tipo de hotéis costuma acomodar-se?

- a) Hotéis sustentáveis
- b) Hotéis standard
- c) Não tenho preferência

B8. Pensam que os hotéis Sustentáveis têm um papel importante na diminuição dos impactos sobre o meio ambiente?

- a) Sim
- b) Não

Grupo C

Perceção dos hospedagens sobre boas práticas ambientais no Sheraton Lisbon Hotel&Spa

C1. Pensam que o Hotel Sheraton Lisboa cumpre os critérios para ser considerado um hotel sustentável?

- a) Sim
- b) Não

C2. Sabia que o hotel está certificado com galardão Green key?

- a) Sim
- b) Não

C3. Sabia que o Hotel reduziu a quantidade de resíduos com 5 % from 2015 e doou mais de 6000 € a UNICEF em 2017?

- a) Sim
- b) Não

C4. Pensam que o hotel precisa de divulgar mais sobre as suas práticas ambientais aos seus clients?

- a) Sim
- b) Não

C5. Seria interessado em contribuir para a proteção do ambiente e participar nas campanhas do hotel como por exemplo a campanha MGC (Make a Green Choice)?

- a) Sim
- b) Não

C6. Se o Hotel Sheraton Lisboa oferecia serviço de alugar bicicletas. Estaria interessado/a em usar este serviço?

- a) Sim
- b) Não

C7. Qual é o grau de importancia que atribui aos seguintes boas praticas ambientais implimentadas no hotel Sheraton?

Escolhe de 1 escala a 5 em que 1 é nada importante e 5 é extremamente importante.

Praticas ambientais implimentadas no hotel Sherton Lisboa	1	2	3	4	5
A reciclagem dos resíduos					
O envolvimento dos colaboradores nas programas de voluntariado					
A utilização de produtos de limpeza sem agentes químicos perigosos para o ambiente					
A redução do consumo de água					
A redução do consumo de energia					

Appendix 3 - Waste Treatment 2015 vs 2016 vs 2017

	Total (Ton)			Waste treatment - € 49.00/Ton		
	2015	2016	2017	2015	2016	2017
Urban Solid Waste	219,740	214,840	206,780	10 767,26 €	10 527,16 €	10 132,22 €
Glass	23,440	16,360	21,880			
Plastic Packaging	1,800	4,140	5,700			
Card Packaging	10,780	19,300	29,200			
Metal Packaging	0,000	4,300	5,700			
Wood	0,000	0,120	0,680			
Light bulbs	0,100	0,080	0,240			
Batteries	0,000	0,060	0,040			
Toners and Cartridges	0,940	0,100	0,460			
	258,120	264,420	279,631		-240,10 €	-394,94 €

Appendix 4 – Activity for social community development in Sintra



Source: photo taken by the author, 2018

Appendix 5- Sheraton Lisboa Hotel's energy consumption in 2015, 2016 and 2017

Year	kWh	tonnes of CO ₂ e
2015	4 997036	1.913,87
2016	4 292752	1.644,12
2017	4 063257	1.556,23

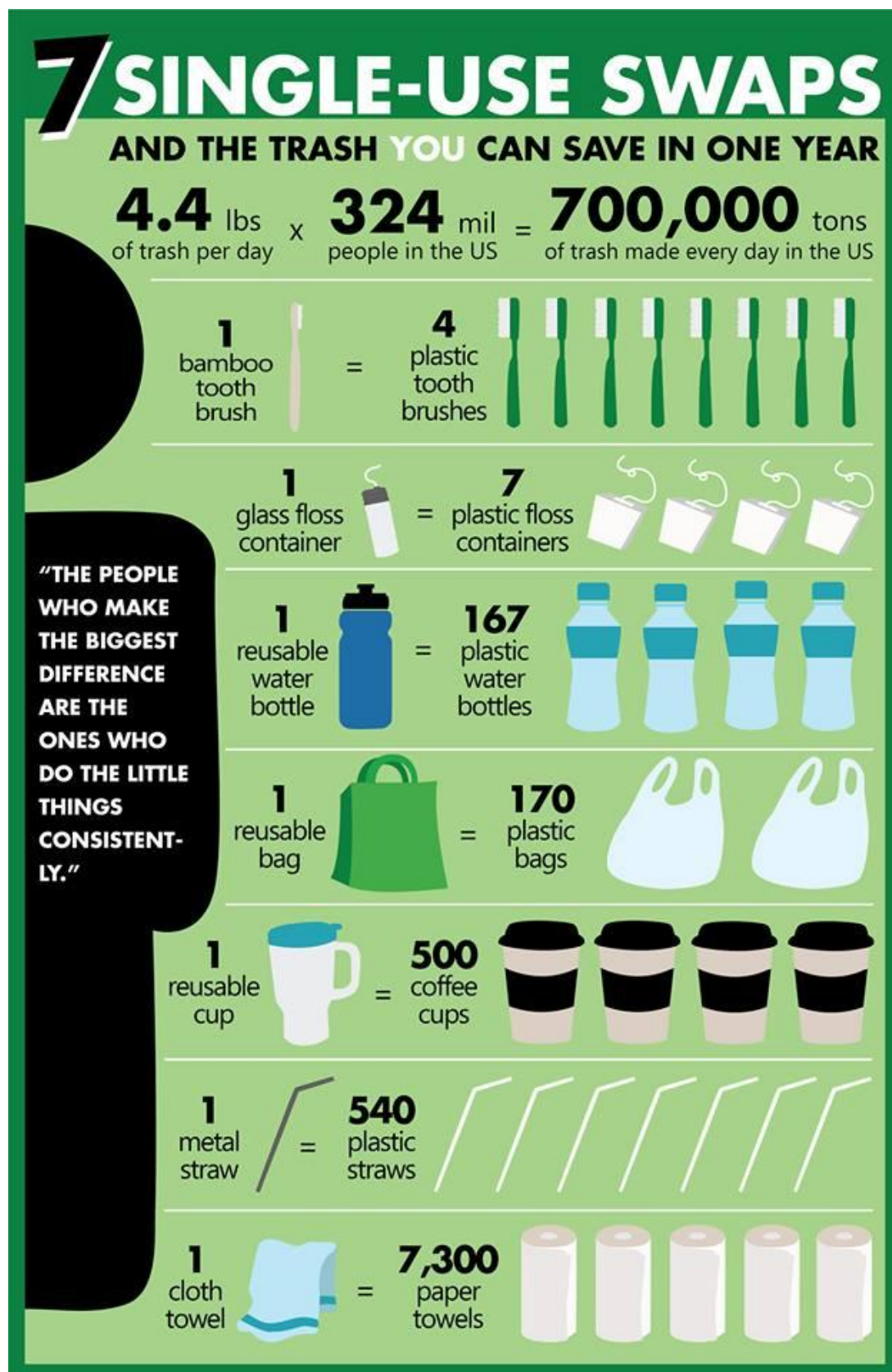
Source: Elaborated by the author

Appendix 6 - Infographic about Plastic Pollution I



Source: Elaborated by the author, 2018

Appendix 7 - Infographic about Plastic Pollution II



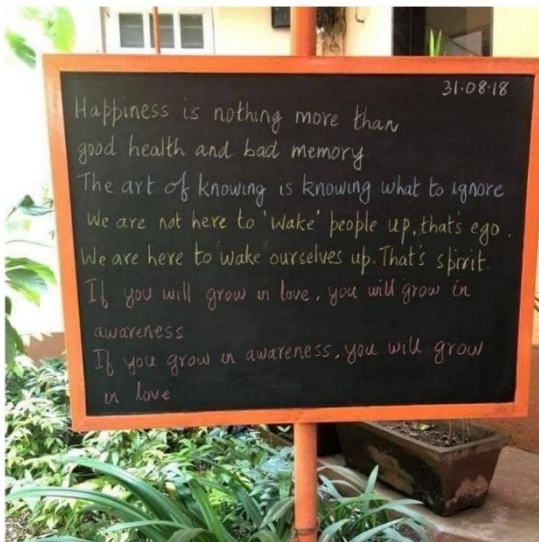
Source: Google, 2018

Appendix 8 - Infographic about Plastic Pollution III



Source: Google, 2018

Appendix 9 – Chalkboard communication



Source: Pinterest, 2018

Appendix 10 - Decorative bicycle



Source: Pinterest, 2018

Appendix 11 - Actual waste separation at Sheraton Lisboa Hotel & Spa



Source: Photo taken by the author, 2018

Appendix 12 - Suggested waste separation in kitchen



Source: Google, 2018

Appendix 13 - Suggested waste separation within departments



Source: Google, 2018

Appendix 14 - Pin board



Source: Pinterest, 2018

Appendix 15 - Wine cork handicraft



Source: Pinterest, 2018

Appendix 16 - Recycled bottle glass



Source: Pinterest, 2018

Appendix 17 - Wall art from empty toilet paper rolls



Source: Google, 2018

Appendix 18 - Recycled glass bottles



Source: Pinterest, 2018

Appendix 19 - Christmas decoration



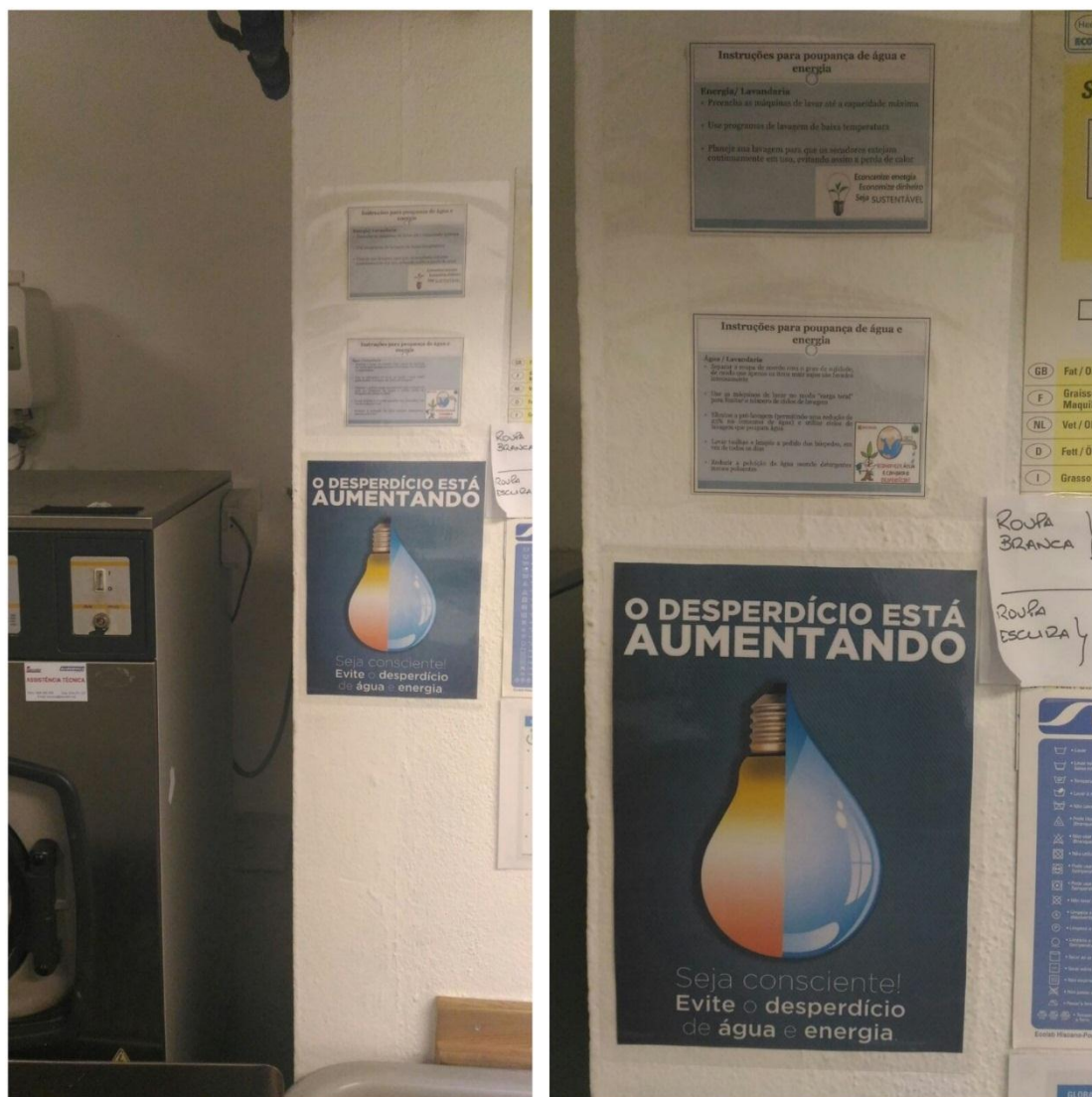
Source: Pinterest, 2018

Appendix 20 - Green Key Award



Source: Photo taken by the author, 2018

Appendix 21 - Sustainable laundry solutions

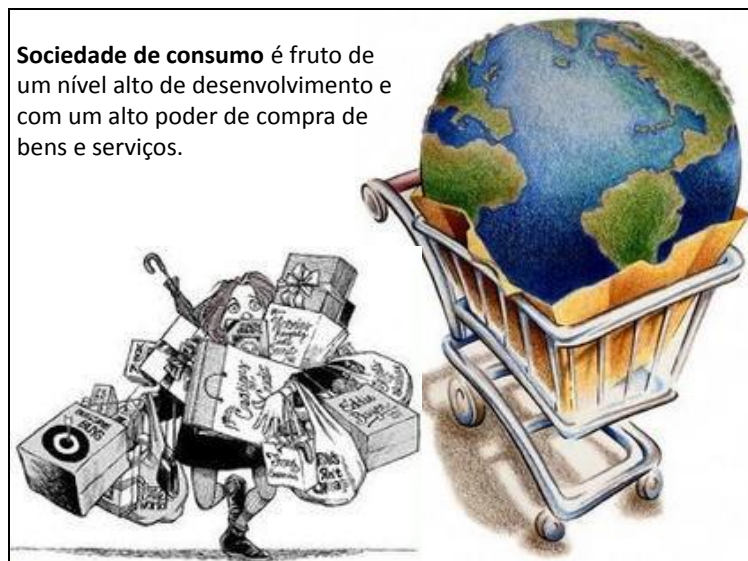


Source: Photo taken by the author, 2018

Appendix 22 - Presentation about the importance of recycling



O objetivo desta apresentação é divulgar-vos algumas informações sobre a reciclagem e a sua importância.



Sociedade de consumo é fruto de um nível alto de desenvolvimento e com um alto poder de compra de bens e serviços.

Mas antes de falar sobre a importância da reciclagem, primeiro que tudo queria destacar o fato que nós somos considerados uma sociedade de consumo.

O que isto significa?

Sociedade de consumo é fruto de um nível alto de desenvolvimento industrial, com um alto poder de compra de bens e serviços.

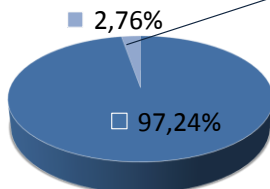
So que infelizmente essa sociedade preocupa-se apenas em vender. Mas do ponto de vista ambiental, isto é totalmente insustentável, porquê a natureza que oferece a matéria prima para as indústrias, não consegue repor-se ao ritmo da produção e venda de produtos.

ESGOTAMENTO DOS RECURSOS NATURAIS



Ou seja, transformando-nos numa sociedade de consumo significa que estamos a esgotar quase todos os recursos preciosos e limitados do Planeta (como por exemplo água, petróleo, carvão, alimentos, gás natural e outros) e claro que sendo uma sociedade de consumo em consequência produzimos uma quantidade alarmante de resíduos. A seguir, vou falar sobre cada um destes recursos naturais e limitados da Terra.

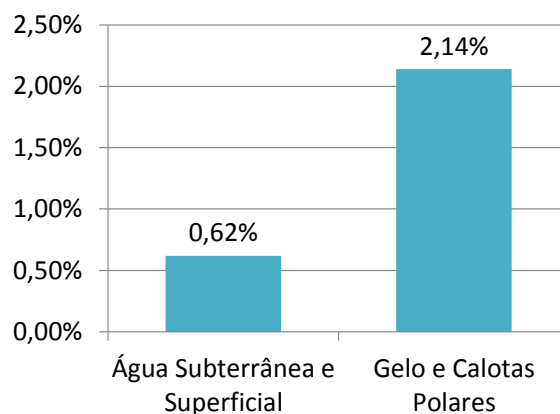
Distribuição da água na Terra

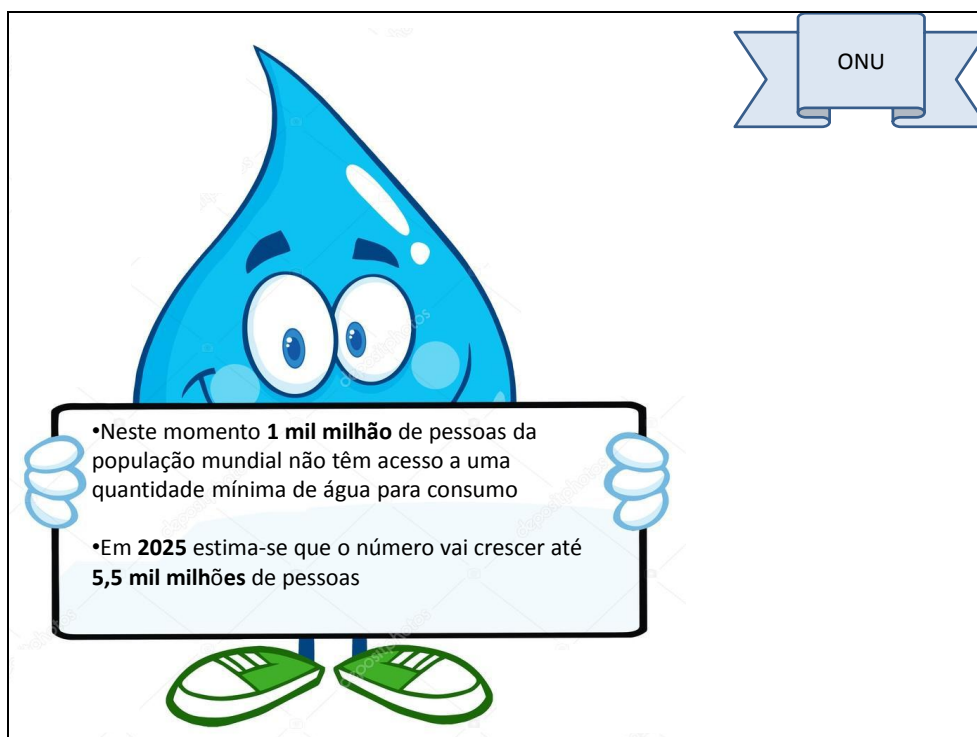


■ Água Salgada (Oceanos) ■ Água Doce


Água Doce (Gelo+ Líquida)

■ Água Doce (Gelo+ Líquida)





A Organização das Nações Unidas (ONU) nos alerta sobre a importância do uso consciente da água.



Água em Portugal

“ O problema é grave, embora não ponha em causa o abastecimento de água para consumo humano. **As barragens estão com menos água do que em anos anteriores. A bacia do Sado é a zona mais preocupante.** “Matos Fernandes o ministro do Ambiente

O ministro garante que a situação está a ser acompanhada ao pormenor e que vão ser definidas as restrições sobretudo na agricultura, o ramo que utiliza quantidades enormes de água. Mas nós também precisamos de fazer a nossa parte, sendo mais conscientes em relação ao uso da água.



Curiosidades



2,5 milhões
litros de
água



1,9 milhões
de litros de
água

Tenho aqui algumas curiosidade para vocês, por exemplo:

Uma única pessoa pode economizar até 1,9 milhões de litros de água ao longo da vida se simplesmente lavar os dentes com a torneira fechada. Isto equivale quase uma piscina olímpica. (2.500.000 litros de água)



Curiosidades



1 quilo- 15.000 litros de água



1 quilo- 6000 litros de água



1 quilo-3.700 litros de agua de água

Meatless Monday

A Segunda-Feira Sem Carne foi revivida em 2003 com o objetivo de prevenir doenças causadas pelo excesso do consumo de carne



Portanto, devido ao consumo enorme de carne surgiu a campanha Segunda Sem Carne. Mas também a Segunda-feira sem carne não é uma ideia nova. Durante a Primeira Guerra Mundial, a Administração de Alimentos dos EUA pediu que as famílias reduzissem o consumo de carne para entregar aos soldados. Então o governo proclamou “Meatless Monday”.

A segunda-feira sem carne foi revivida em 2003, so que desta vez com o objetivo de prevenir doenças causadas pelo excesso do consumo de carne.

Assim como a nossa geração come mais carne do que as gerações anteriores, a mensagem desta campanha é “cortar a carne, um dia por semana” isso é uma forma de as pessoas fazerem algo de bom para sua saúde e para o planeta.

Por essas mesmas razões é que o nosso hotel quer incentivar os nossos colaboradores em juntarem-se a nossa campanha **Segunda Sem Carne**.

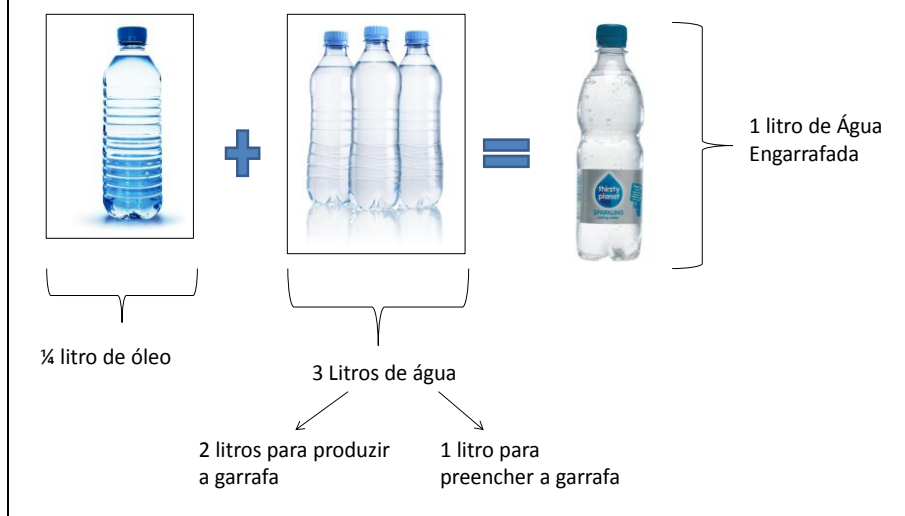
Segunda Sem Carne

<https://www.youtube.com/watch?v=xa0zcQE0qlg>



Aqui tenho um video que nos vai ajudar perceber melhor as razões dessa campanha.

Litros de água necessários para a produção de uma garrafa de água



A garrafa reutilizável - a melhor opção para nós é para o ambiente

Durante 1 ano:

- 300 garrafas de plástico
- + 150 euro



Durante 4 anos:

- 1200 garrafas de plástico
- + 500 e 600 euro

Que para além de nos ajudar economizar dinheiro também vamos salvaguardar o ambiente dos efeitos negativos do plástico.

Por exemplo se nós bebemos uma garrafa de água por dia, então em média utilizamos 300 garrafas de plástico por ano, logo gastamos 150 euros por ano.

No meu caso, como utilizei apenas uma garrafa há 4 anos, consegui evitar o desperdício de 1200 garrafas e poupei entre 500 e 600 euro.



Na verdade é que sem água, a produção de alimentos também vai diminuir. Porque em média, 70% da água consumida no mundo, é utilizada para produção de alimentos.



O ouro negro vai acabar um dia. Não sabemos ainda quando, mas a Agência Internacional de Energia publicou no seu relatório de 2010, que a produção de petróleo deve atingir seu pico por volta de 2035. Depois disso estará em baixo. Ninguém sabe ainda com qual velocidade, mas um dia, o mundo terá de viver sem petróleo.



O gás natural é mais um combustível fóssil, utilizado por indústrias e automóveis, que um dia ele também vai-se esgotar. A previsão é que isso acontecerá daqui a 45 anos. (Segundo dados da BP Statistical World Review 2010.)

A sexta extinção em massa



Cientistas da Universidade de Berkeley, Estados Unidos, publicaram um estudo mostrando que estamos caminhando na direção da sexta extinção em massa, 75% das espécies do planeta simplesmente deixarão de existir.

As consequências desse uso excessivo dos recursos naturais são tão graves que cientistas da Universidade de Berkeley, na Califórnia, Estados Unidos, publicaram um estudo mostrando que estamos caminhando a passos largos na direção da sexta extinção em massa, uma situação na qual 75% das espécies do planeta simplesmente deixarão de existir.

Estima-se que no final do século 21 vamos ter uma perda entre 20% e 50% de flora e fauna.

Essas espécies são nossas companheiras em nossa viagem pelo universo. Perdê-las têm consequências graves. **Elas são essenciais para manter o ecossistema funcionando.** (a combinação de gases da atmosfera, a fertilização do solo, polinização).

Por isso precisamos de reduzir a perda de habitats através da desflorestação, a pesca e caça excessiva, a poluição e outros fatores que estão causando o episódio de extinção atual.

A quinta extinção em massa - 65 milhões de anos atrás

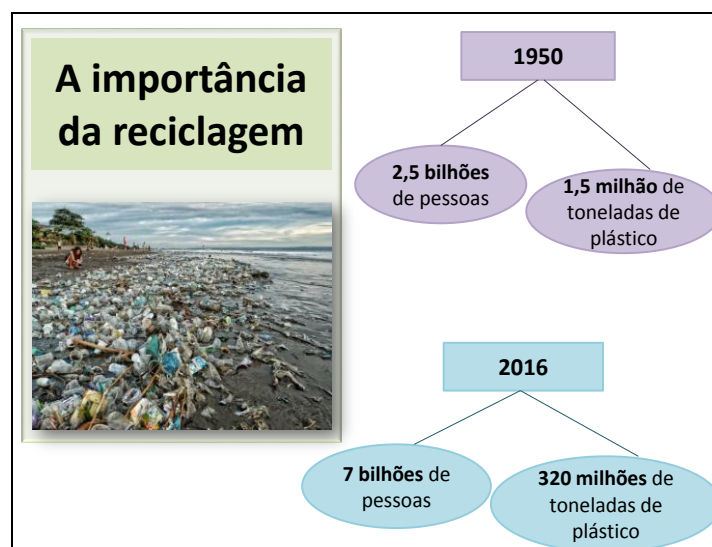


A última extinção em massa, 65 milhões de anos atrás, eliminando os dinossauros, e foi fruto da queda de um asteroide na Terra.

A última extinção em massa, aconteceu 65 milhões de anos atrás, foi fruto da queda de um asteroide na Terra, eliminando os dinossauros.



Então, o objetivo desta introdução sobre os recursos naturais do Planeta foi, em princípio para demonstrar que a humanidade está a consumir em excesso e que como consequência estamos a esgotar os recursos da nossa futura geração onde também vou fazer parte os nosso filhos e netos, por isso mesmo acho uma razão bastante importante para pensarmos no assunto e mudar os nossos hábitos.



E como consequência ao nosso consumo em massa estamos a produzir resíduos de uma maneira alarmante e que infelizmente uma grande quantidade deles em vez de ser reciclados vão parar nos oceanos ou no solo.

Para ter uma noção da quantidade do nosso consumo excessivo neste momento vou mostrar-lhe uma estatística que nos ajudará a perceber melhor a importância da reciclagem.

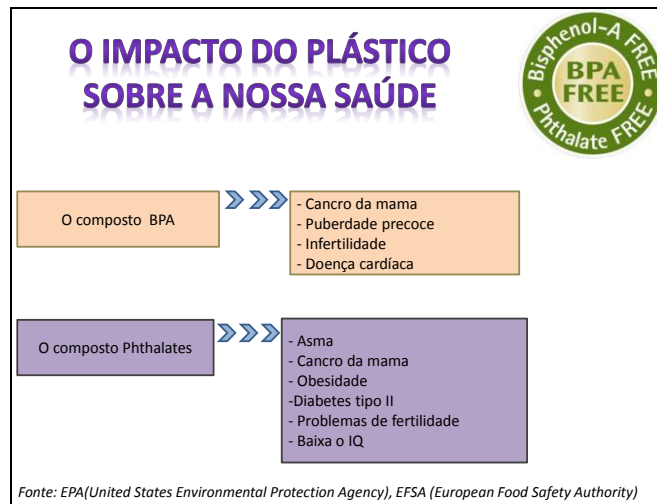
Os dados são os seguintes:

Em 1950 a população mundial de 2,5 mil milhões de pessoas produziu 1,5 milhão de toneladas de plástico.

Em 2016, uma população global de mais de 7 mil milhões de pessoas produziu mais de 320 milhões de toneladas de plástico.

E o pior é que esse número é definido para dobrar até 2034! A não ser que façamos alguma coisa para mudar isso.

Imagem- praia em Bali



Estudos mostram que as substâncias químicas como o BPA que se encontra no plástico pode se infiltrar na comida ou bebida e entrar no nosso corpo. O BPA é um composto químico com perturbação hormonal que tem sido associado a uma série de problemas graves de saúde, como por exemplo cancro da mama, doença cardíaca e infertilidade.

Os produtos como BPA estão por toda parte. São presentes nos utensílios de cozinha, em especial nos produtos infantis, como mamadeiras e copos de criança. Portanto, o leite para a criança pode ser contaminado, por exemplo, quando uma mamadeira feita de plástico com BPA é aquecida em microondas (Mudanças de temperatura, mesmo pequenas, são o suficiente para liberar esse composto químico).

Outro composto com qual precisamos de nos preocupar é Phthalates, que são presentes em quase todos os produtos de plástico a partir de produtos de limpeza doméstica, produtos cosméticos a embalagens de alimentos. Este composto está ligado a asma, cancro da mama, obesidade, diabetes tipo II, problemas de fertilidade e mesmo baixa o IQ. Fonte: EPA(United States Environmental Protection Agency), EFSA (European Food Safety Authority)

O impacto do plástico sobre o nosso ambiente



As garrafas descartáveis podem demorar < 1000 anos para atingir a decomposição total.

O impacto do plástico sobre o nosso ambiente



Nos corpos humanos já foram encontradas partículas de plástico, o sal marinho/alimentar também tem partículas do plástico o que significa que o plástico está mesmo a contaminar no só o ambiente mas o nosso corpo também.

O impacto do plástico sobre o nosso ambiente

15.000 pedaços de plásticos são despejados nos oceanos todos os dias.



Em soma isso é 8 milhões de toneladas de plásticos por ano

O IMPACTO DO PLÁSTICO SOBRE O NOSSO AMBIENTE



Na Normandia foi encontrada uma baleia morta que tinha 800 quilos de plástico no estômago.



O impacto do plástico sobre o nosso ambiente



“Há uma “ilha” de plástico a flutuar no meio do Pacífico com uma area de 1.6 milhões de quilômetros quadrados, o que equivale a mais de 17 vezes o tamanho de Portugal.”

(Revista saientific Reports)

1,6 000.000 km² (92 000 km²)

Este cúmulo de plástico esta tambem conhecido como “o oitavo continente”.

A ilha de plástico no Pacífico



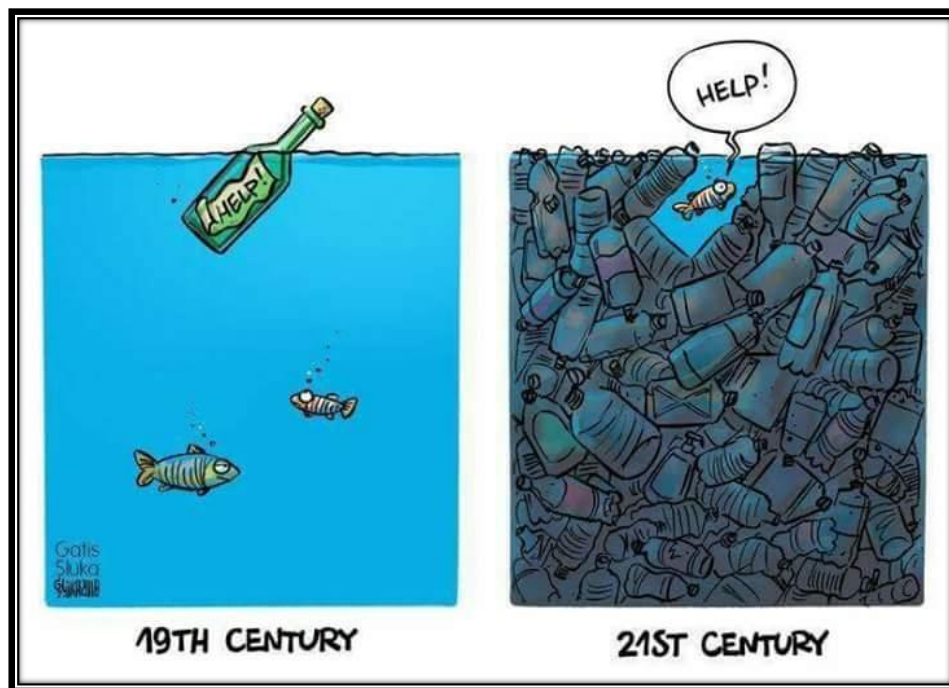
(short video about the great Pacific Garbage Patch)

"Zonas Mortas" nos Oceanos



Os cientistas identificaram mais de 200 "Zonas Mortas" no oceano onde a vida marinha já não pode sobreviver mais, devido à poluição humana que como consequencia reduzem a concentração do oxigênio dissolvido nos oceanos.

“Um relatório de 2017 para a Fundação Ellen MacArthur estimou que, em 2050 haverá mais plástico no oceano do que peixe.”



PORQUÊ PROTEJER OS OCEANOS?



- 70% do oxigênio que nos estamos respirar vem de plantas marinhas
- Os oceanos absorvem 30% do nosso CO₂
- Suporta a maior biodiversidade do planeta

O Impacto da Reciclagem

Através da reciclagem evitamos a poluição do ar, da água e também preservamos os recursos naturais.



SAVE THE EARTH

- Reciclar uma tonelada de papel salvaria 17 árvores.
- O papel reciclado evita a poluição do ar com 74% e a poluição da água com 35%.



O Impacto da Reciclagem



1 lata reciclada estará de volta às prateleiras dentro de 6 semanas

1 lata reciclada economiza energia suficiente para 3 horas de televisão



Factos que nos motivarão mudar os nossos hábitos

Má qualidade do ar desenvolve problemas de saúde como:

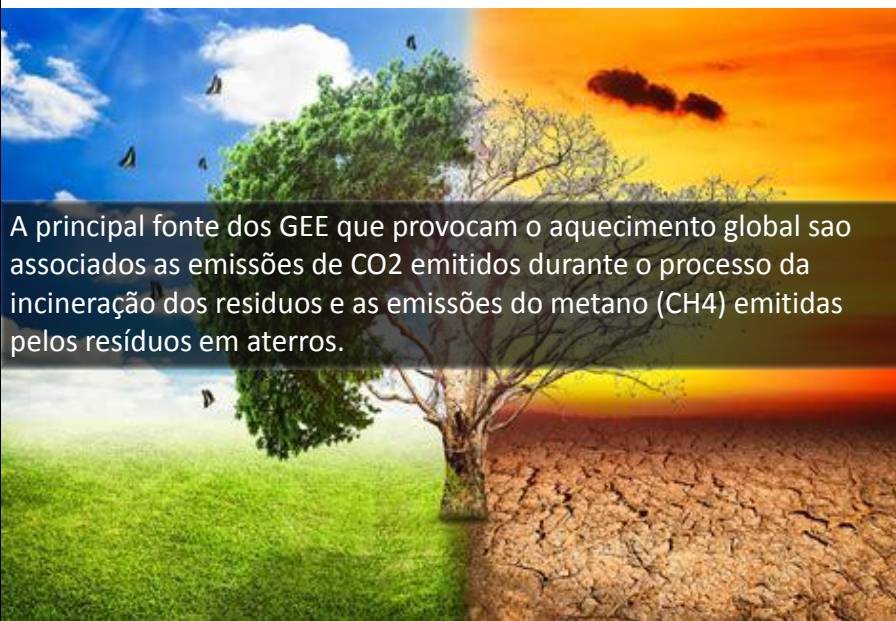
- Tensão respiratória grave
- Dores de cabeça
- Tonturas
- Doenças cardiovasculares
- Acidente vascular cerebral
- Cancro do pulmão

De acordo com o relatório da OMS cerca de 3 milhões de mortes estão ligadas à exposição à poluição do ar exterior. (OMS relatório, 2017)



Ride green to live clean


Os Resíduos Causam Aquecimento Global



A principal fonte dos GEE que provocam o aquecimento global são associados as emissões de CO₂ emitidos durante o processo da incineração dos resíduos e as emissões do metano (CH₄) emitidas pelos resíduos em aterros.

Os nossos resíduos estão a emitir gases com efeito estufa (GEE) que provocam o aquecimento global, estes tipos de gases são dióxido de carbono (CO₂) emitidos durante a incineração dos resíduos e as gases como metano (CH₄) emitidas durante a decomposição dos resíduos em aterros.

Portanto esses gases formam uma camada de carbono que tem como resultado o aquecimento global, porque esta camada impede os raios do sol sair de volta no espaço.

An illustration showing a polar bear standing on a small piece of ice floating in the ocean. Below the water line, the ice floe is filled with various icons representing industrial activities and greenhouse gas emissions, including wind turbines, a factory, a recycling symbol, a lightbulb, and the chemical formula CO2. The sky above is blue with a yellow sun and white clouds.

Os Resíduos Causam Aquecimento Global

As emissões associadas à gestão de resíduos podem ser significativamente reduzidas através da prevenção da produção, da valorização multimaterial e da valorização orgânica.

Um aumento de 1 ou mais graus Celsius num período de 100 à 200 anos seria considerado aquecimento global.

An illustration of the Earth as a melting ice cream cone. The Earth's surface is depicted as the ice cream, with blue and white areas representing water and ice. The cone itself is a golden-brown wafer. The background is dark blue.

Aquecimento global

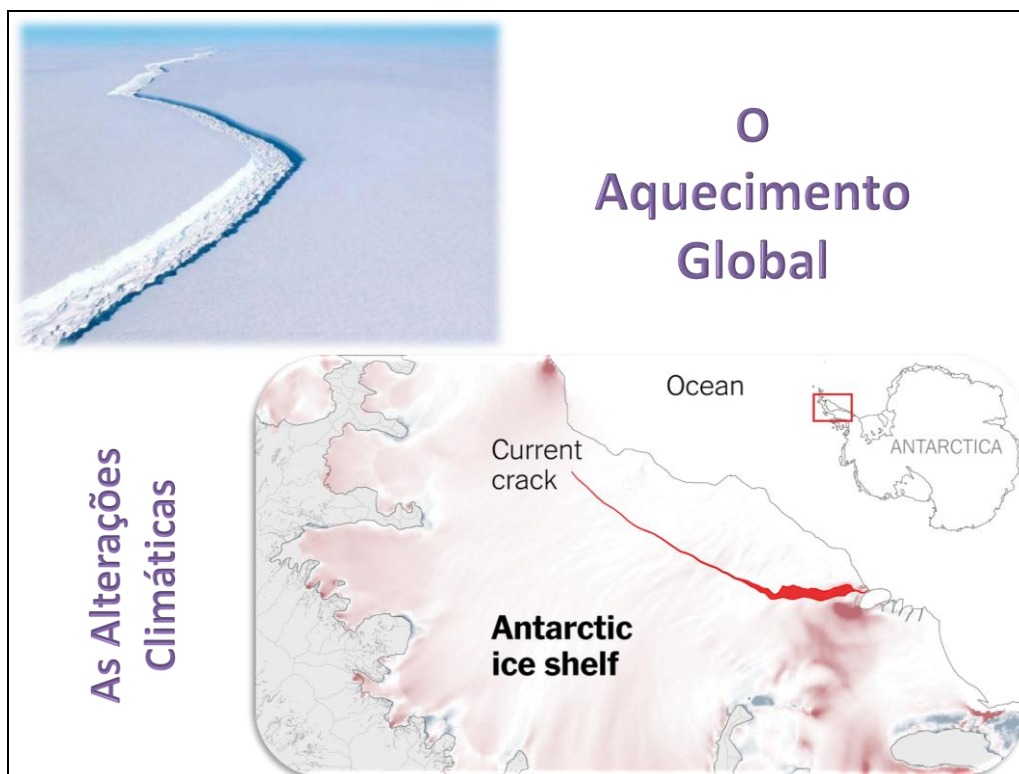
Os Relatórios do Painel Intergovernamental sobre as Alterações Climáticas (IPCC) identificaram as emissões antropogénicas como o fator determinante para o aquecimento do planeta, desde 1750.

Em termos específicos, um aumento de 1 ou mais graus Celsius num período de cem à duzentos anos seria considerado aquecimento global.

Os cientistas determinaram que a Terra aqueceu 0,6 graus Celsius entre 1901 e 2000.



Os cientistas determinaram que a Terra aqueceu 0,6 graus Celsius entre 1901 e 2000. Isto, na realidade é muito, visto que a Terra pode levar milhares de anos para aquecer naturalmente apenas 1 grau.



No entanto, se a placa de gelo da Antártica Ocidental, se fosse a derreter e cair no mar, isso iria empurrar o nível do mar até 10 metros e muitas áreas costeiras iria desaparecer completamente sob o oceano. (Fonte: NASA) (mais de 50 000 km².)



Um outro efeito do aquecimento global é que as temperaturas da superfície global dos oceanos aqueceram 1,5 desde 1880, mesmo que esse número parece pequeno ele na realidade tem grande consequências como já tinha falado que para a temperatura média da Terra aumentar naturalmente 1 grau isso aconteceria em milhares de anos. E pior é que com esse aumento da temperatura média dos oceanos, os furacões vou tornar-se mais fortes porquê eles obtêm a sua energia feroz e destrutiva através das águas quentes.

Como podemos contribuir para a salvaguarda do ambiente

<p>1. Fazer reciclagem</p> 	<p>2. Usar garrafas de reutilizaveis</p> 
<p>3. Usar sacos reutilizaveis</p> 	<p>4. Plantar mais árvores</p> 

Como podemos contribuir para a salvaguarda do ambiente

1. Fechar a torneira enquanto lavar os dentes



2. Não jogar o lixo na rua



3. Evitar acender lâmpadas durante o dia



4. Evitar desperdiçar o papel



Reduzir os resíduos dentro do hotel

	Total (Tonelada/anos)		
	2015	2016	2017
RSU	219.740	214.840	206.780



O nosso hotel Sheraton Lisboa produz todos os anos mais de duzentas toneladas de resíduos que vão todos para os aterros onde contamina o nosso sólo e o ar.

Para terem uma noção duzentas toneladas de resíduos equivale mais ou menos a 40 elefantes.

Portanto isso é a quantidade que o nosso hotel está a mandar para os aterro sanitários todos os anos.

E a solução deste problema, implica a nossa participação através da reciclagem.

Reduzir os resíduos dentro do refeitório



Em conclusão o hotel precisa de reduzir os resíduos sólidos urbanos e aumentar a taxa de reciclagem para diminuir o seu impacto sobre o meio ambiente, mas que para isso nós não vamos conseguir sem a vossa colaboração.

O hotel vai tratar da organização e dos equipamentos para a separação dos resíduos e a nós so nos resta de contribuir através da reciclagem.

Portanto a mensagem mais importante que vos queira divulgar é que o hotel pretende fazer a reciclagem dos resíduos organicos, ou seja fazer compostagem de restos de comida.

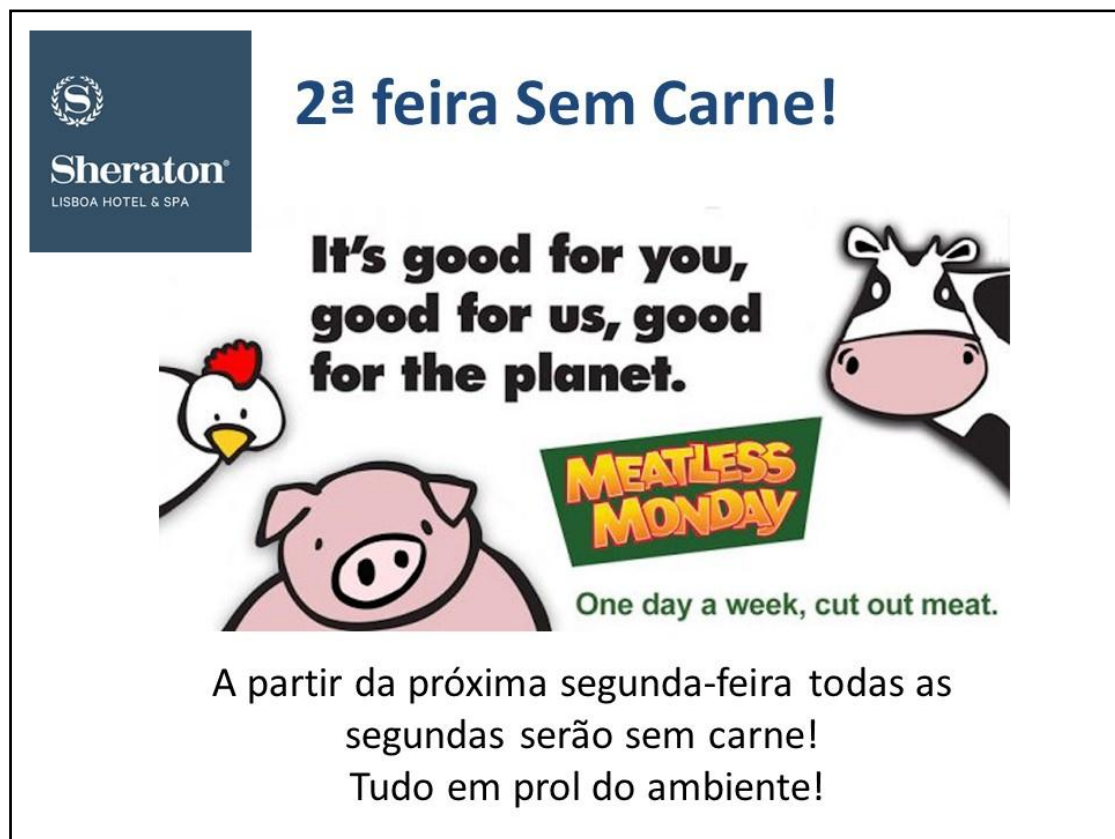
Mas também queria destacar o facto que se nós não fazemos a reciclagem coreta então vamos estragar todo o processo da reciclagem, por isso se nós queremos mesmo fazer a reciclagem então é muito importante de não misturar os resíduos por que desta maneira a empresa da gestão de resíduos não consegue fazer a reciclagem.

E para que o hotel conseguir fazer isto, quero vos informar que em breve vai ser reorganizado o processo da reciclagem no refeitório.



É muito importante de não nos esquecer que o desenvolvimento sustentável é a chave para um futuro mais seguro e um mundo melhor para os nossos descendentes.

Appendix 23 - The communication of Meatless Monday program



Source: Elaborated by the author, 2018

LISBOA SHERATON HOTEL & SPA | JUNE 2018

GREEN AGENDA



INTRODUCTION

Lisboa Sheraton Hotel & SPA is determined to leave a green footprint on the environment without taking the quality of its services and the comfort from its guests.



“WE CARE ABOUT THE ENVIRONMENT AND SOCIETY”



As a confirmation of being indeed a sustainable hotel we would like to emphasize the fact that our hotel has been awarded with the Green Key Certification for fifth consecutive year.



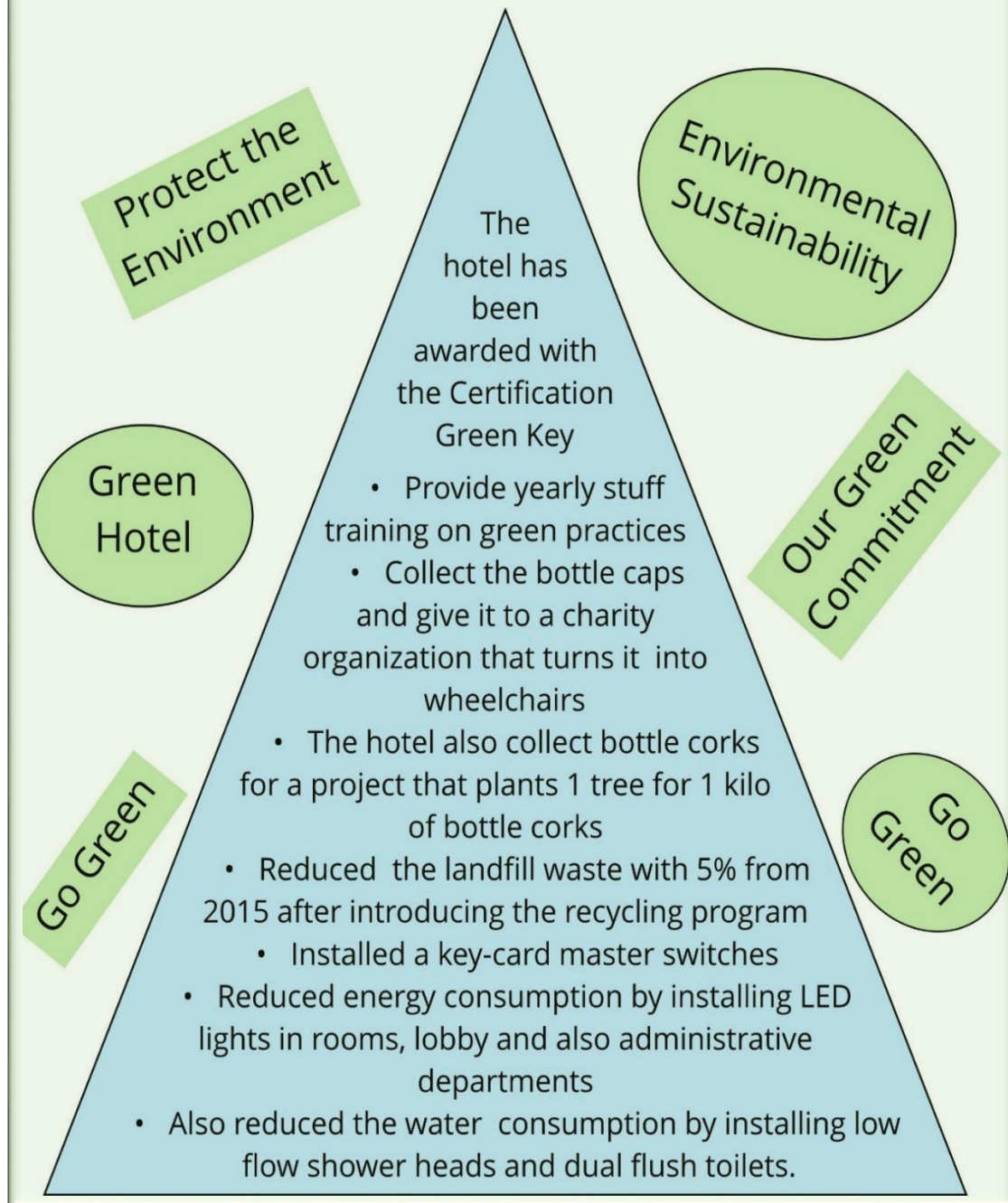
The Lisboa Sheraton Hotel's goal is to contribute to the protection of the environment for a better greener world.

We are working on turning our client's footprints into green ones so they could enjoy their vacation with a clean conscience.

Developing in this way the campaign MGC (Make a Green Choice) where we encourage our guests to contribute to the preservation of water by reusing their towels and sheets.



SHERATON GREEN ACHIVEMETS:



Source: Elaborated by the author, 2018

• **Appendix 25 – Distributed newsletter regarding environmental issues**


CONSUMO DE ÁGUA

APESAR DE O NOSSO PLANETA SER MAIORITARIAMENTE COMPOSTO POR ÁGUA, APENAS 0,6% DA ÁGUA EXISTENTE NO PLANETA SERVE PARA CONSUMO HUMANO.

A POUPANÇA DESTE RECURSO É JÁ UMA PREOCUPAÇÃO EM MUITOS PAÍSES EM QUE O CONSUMO DE ÁGUA É CONTROLADO.

COMO POSSO POUPAR ÁGUA?

- Reduzir o tempo de banho e aproveitar a água fria no início do banho para outras tarefas (autocolismo, rega, etc).
- Fechar a torneira enquanto lava os dentes.
- Evite o consumo excessivo de produtos de plástico (é uma indústria que consome muita água)
- Reduza o consumo de carne (indústria altamente consumidora de água)



SABIAS QUE???

70% DA ÁGUA CONSUMIDA NO MUNDO É GASTA PELA INDÚSTRIA ALIMENTAR

A dica sustentável da semana
25 semana

CONSUMO DE ÁGUA



SE LAVARES OS DENTES COM A TORNEIRA FECHADA DURANTE TODA A TUA VIDA, CONSEGUES POUPAR **1,9 MILHÕES DE LITROS** DE ÁGUA.

Isto chegará para preencher quase uma piscina olímpica !!!

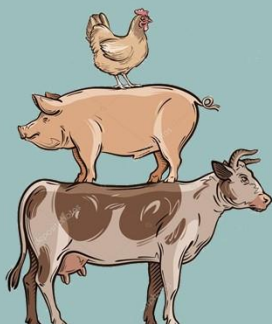




SABIAS QUE???

A dica sustentável da semana
26 semana

PARA PRODUIR 1KG DE CARNE DE ...



Frango, são precisos **3.700 litros** de água !!

Porco, são precisos **6.000 litros** de água !!

Vaca, são precisos **15.000 litros** de água !!



Sheraton
LISBOA HOTEL & SPA

SABIAS QUE???

A dica sustentável da semana
27 semana



Hoje em dia, 1 milhão de pessoas não tem acesso a uma quantidade mínima de água para consumo !!

Em **2025** estima-se que o número vá crescer até **5,5 mil milhões** de pessoas !!



Sheraton
LISBOA HOTEL & SPA

SABIAS QUE???

A dica sustentável da semana
28 semana

A PRODUÇÃO DE PETRÓLEO VAI ATINGIR O SEU PICO EM 2035 !!

Depois disso nunca mais voltará a crescer ...



SABIAS QUE???

A dica sustentável da semana
29 semana

AS GARRAFAS DESCARTÁVEIS PODEM DEMORAR
1000 ANOS PARA ATINGIR A DECOMPOSIÇÃO TOTAL



USA GARRAFAS REUTILIZÁVEIS !!

VAMOS FAZER A DIFERENÇA 💪



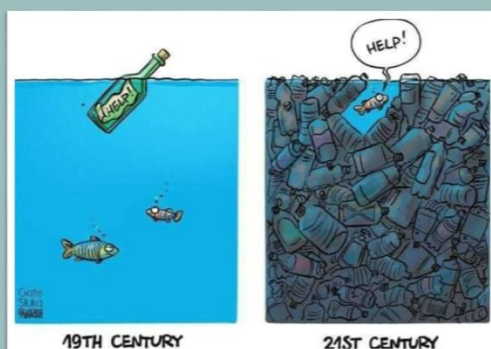
SABIAS QUE???

A dica sustentável da semana
30 semana



Só 14% de todo o plástico produzido no mundo está a ser reciclado ...

Os restantes 86% vão para o solo ou para os oceanos !!



EM 2050 HAVERÁ MAIS PLÁSTICO NOS OCEANOS DO QUE PEIXE !!

HÁ UMA “ILHA” DE PLÁSTICO A FLUTUAR NO MEIO DO PACÍFICO COM UMA ÁREA DE 1.6 MILHÕES DE KM²



Esta ilha tem 17 vezes o tamanho de Portugal !!!



SABIAS QUE???

A dica sustentável da semana
33 semana

Os cientistas identificaram mais de 200 “zonas mortas” nos Oceanos onde a vida marinha já não existe devido à poluição humana.



SABIAS QUE???

A dica sustentável da semana
34 semana

UMA LATA RECICLADA ...

... economiza
energia suficiente
para 3 horas de
televisão



... estará de volta
às prateleiras
dentro de 6
semanas



SABIAS QUE???

A dica sustentável da semana
35 semana

SÓ NOS ESTADOS UNIDOS DA AMÉRICA ...



São usadas **500 000 000**
palhinhas de plástico
diariamente !

Isto é suficiente para
circular a Terra 2,5 vezes !!



SABIAS QUE???

A dica sustentável da semana
36 semana

PALHINAS:

- 1 MINUTO PARA SER FABRICADA
- 10 MINUTOS DE USO
- 100 ANOS DE NATUREZA
- MILHARES DE MORTES DE ESPÉCIES MARINHAS

SERÁ QUE COMPENSA ??



SABIAS QUE???

A dica sustentável da semana
37 semana

ADOTA UMA CANECA!



Na pausa para o café, evita copos descartáveis ...

A prática diminui a produção de lixo e contribui
para a limpeza do teu local de trabalho !!



SABIAS QUE???

A dica sustentável da semana
38 semana



Source: Elaborated by the author, 2018

Appendix 26 – Elaborated box for the collection of goods that are to be donated



Source: Photo taken by the author, 2018

Appendix 27 – Campaign to collect goods for donations



Source: Elaborated by the author, 2018

Appendix 28 – Collected goods destined to be donated to a charitable organization



Source: Photo taken by the author, 2018



Source: Elaborated by the author, 2018

Appendix 30 - Campaign for the collection of plastic bottle caps

Recolha de Tampinhas



COLABORA - PARTICIPA

lipor
COM O AMBIENTE NO CORAÇÃO

A LIPOR associou-se ao movimento nacional de recolha de tampinhas, estando neste momento a receber as tampinhas de plástico, canalizando-as para reciclagem e utilizando o valor de venda na doação de equipamentos médicos, ortopédicos ou similares.

Sheraton

Atraves de 7,8 toneladas de tampas, podem ser oferecidas:

- 16 cadeiras de rodas e 1 cama articulada

Que tampinhas são aceites?

- de detergentes
- higiene e beleza
- de alimentos
- de canetas

Source: Elaborated by the author, 2018

Appendix 31 - Campaign for the collection of plastic bottle caps

Agradecemos a todos os nossos colaboradores que
contribuírem para ação de sustentabilidade do hotel



Recolha de Tampinhas de Plástico

9 kg

Source: Elaborated by the author, 2018

Appendix 32 - Campaign for the collection of wine corks



Source: Elaborated by the author, 2018

Appendix 33 – Campaign for the collection of wine corks

Recolha de Rolhas de Cortiça


Sheraton®



Através de **295 toneladas de rolhas de cortiça**, foram plantadas cerca de **476 mil árvores** (2016)

Através do Green Cork, a cortiça das suas rolhas vai ser reciclada e vão ser plantados árvores autóctones.



Source: Elaborated by the author, 2018

Embalagens de Vidro

Depositar ✓



- Frascos
- Garrafas

Não Depositar 



- Janelas
- Espelhos
- Lâmpadas
- Cerâmicas
- Loiça

Source: Elaborated by the author, 2018

Appendix 35 – Marriott Competition “Respect the Towel”



Source: Photo taken by the author, 2018